DOCUMENT RESUME

ED 226 765 IR 050 350

AUTHOR	Holznagel, Donald C., Ed.
TITLE	MicroSIFT Courseware Evaluations (1-87).
INSTITUTION	Northwest Regional Educational Lab., Portland, Oreg.
SPONS AGENCY	National Inst. of Education (ED), Washington, DC.
PUB DATE	82
CONTRACT	400-83-0005
NOTE	124p.; Users are encouraged to reproduce the evaluations for further dissemination.
AVAILABLE FROM	Northwest Regional Educational Laboratory, 300 S.W. Sixth Ave., Portland, OR 97204.
PUB TYPE	Reference Materials - Directories/Catalogs (132) -- Information Analyses (070) -- Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	*Computer Assisted Instruction; *Computer Programs; *Course Evaluation; Evaluation Criteria; Microcomputers
IDENTIFIERS	Courseware Evaluation; *MicroSIFT; *Resources in Computer Education; Software Reviews

ABSTRACT

A clearinghouse for information about microcomputer-based educational applications has been established at the Northwest Regional Educational Laboratory (NWREL). The clearinghouse, MicroSIFT (Microcomputer Software and Information for Teachers), is a central project of NWREL's Computer Technology Program. A primary concern has been the development of an evaluation process using a network of established educational institutions and consortia (SIFTnet). The process results in a concise single sheet resume describing and evaluating each software package. The same data are entered into the Resources in Computer Education (RICE) database, where they are available for online retrieval. This document consists of brief descriptions of MicroSIFT and RICE together with copies of the first 87 "courseware evaluations" performed. The titles of the software packages evaluated are as follows: You Can Bank On It; Money Management Assessment Series; Home Safe Home; Job Readiness--Assessment and Development; Poison Proof Your Home; EMSI-6; Income Meets Expenses; Fractions; Geography Explorer: USA; Factoring Whole Numbers; The Shell Games Education Series; Odell Lake; Arithmetic Racing; Limacons and Their Areas; Arithmetic of Functions; Typing Tutor; Circulation (Organs); Math Sequences; Function Grapher; Mathematics Drill and Practice; Library Skills: What's There and How to Find It; Binomial Multiplication; Limits of Sequences; Karel the Robot; Volcanoes; Addition and Subtraction 1 & 2; Alphabet Keyboard; Alien Addition; The Wizard; Math Strategy: Linear Search Games; Instructional Computing in Algebra II; Touch Typing; Numeric Data Entry Practice; Sentence Diagramming; Wordwatch; Evolut; Minus Mission; Comprehension Power Program; Demo-Graphics; Newton; More Algebra: Slope; Apple*Surface; Sentences; Millikan; The Spanish Hangman; Homonyms in Context; More Algebra: Comp; More Algebra: Disc; More Algebra: Quad; More Algebra: Simul; Grammar Problems for Practice: Homonyms; Essential Math Program; Fundamental Math I, II, III; English Computorials; Titration; Grammar Package 1; Elementary Mathematics Classroom Learning System: Whole Numbers; Energy Czar; Computer Simulated Physics Experiments; Number Blast; My First Alphabet; Euclid Geometry Tutor; Test Bank; The Arithmetic Classroom: Fractions-Addition & Subtraction; The Arithmetic Classroom: Decimals; Metric Drill; Math Concepts; Easy Grader; Basic English Skills; Antonyms/Synonyms; Consonants/Blends; Create Fill-in-the-Blanks; Create Skills--Elementary/Intermediate; Create Spell-It; Keyboard Organ; Lemonade; Letter Recognition; Magic Spells; Math Strategy; Nouns/Pronouns; Roots/Affixes; Speed Reader; Spelling Strategy; Verbs; Vocabulary Dolch; Word Families; and Word Search. (WTB)

ED226765

MicroSIFT Courseware Evaluations (1-87)

Donald C. Holznagel, Editor

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- ☑ The document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Northwest Regional Educational Laboratory

Portland, Oregon

NIE Contract 400-83-0005

IR 050 350

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Northwest Regional Educational Laboratory

MicroSIFT Project Description

microSIFT

300 S.W. Sixth Avenue Portland, Oregon 97204 (503) 248-6800

A clearinghouse for information about microcomputer-based educational applications has been established at Northwest Regional Educational Laboratory (NWREL) under a contract with the National Institute of Education. The clearinghouse, MicroSIFT (Microcomputer Software and Information for Teachers), is a central project of NWREL's Computer Technology Program. The Program has been productively involved in developing methods and materials for the use of computers in education for more than a decade.

The key objectives of the MicroSIFT clearinghouse are:

1. To develop and implement a model for the dissemination of information about microcomputer software and materials for educational use at K-12 levels.
2. To develop, validate, and implement an evaluation model suitable for computer-based instructional packages.
3. To develop and implement a user support and technical assistance program in the Northwest region, which will increase the capability of local and state education agencies to choose and implement microcomputer applications in education.
4. To develop and implement a feedforward model for guiding and directing development of new computer-based instructional materials.

IR 050 350

The scope of the project includes both instructional and administrative applications for education. The initial focus of staff efforts has been on instructional applications because of the high interest and available packages in that area. The project has also been collecting information on non-instructional software, and developing approaches to evaluating those materials.

ORGANIZATIONAL BASE

A network of established educational institutions and consortia (SIFTnet) is the major mechanism for the collection and evaluation activities of MicroSIFT. The network consists of over two dozen educational agencies (school districts and regional service centers) which serve a large number of schools and provide significant work in instructional applications of computers. Their personnel are experienced in computer-based education and in dealing with the technical problems involved in program transfer. They were chosen because they had several years of involvement in instructional computing, including development and evaluation of computer-based materials, provision of inservice for teachers, support of microcomputer implementation in schools, and have full-time instructional computing staff members.

SIFTnet is the major vehicle for the evaluation process and the source of reviewers and test sites. The members offer access to experienced computer users, qualified summary reviewers, a variety or student groups, geographic locations, and ethnic, minority and socio-economic groups. They are experienced in evaluating computer-based materials, and almost any desired hardware base can be found in use among them.

EVALUATION MODEL

A primary concern of MicroSIFT to date, in line with the second objective, has been the development of an evaluation process and instruments uniquely suited to microcomputer-based instructional materials. MicroSIFT staff were joined in this effort by the Program for Research on Evaluation of NWREL, which is exploring new evaluation techniques and environments.

Sample instruments (checklists, questionnaires, rating scales) used by schools, regional service centers, microcomputer publications and individuals were collected and analyzed. The CONDUIT evaluation procedure and instruments weighed heavily in the initial design. Discussions with organizations having significant experience in the instructional application of computers in the K-12 environment also contributed substantially to the development of this evaluation model.

An Evaluator's Guide was developed to assist evaluators in interpreting and applying the criteria statements in the evaluation form. The Guide was used extensively during 1981 and 1982, and was revised in November of 1982. Education agencies in the U.S. and Canada have used it as the basis for evaluation forms suited to their own situations.

The MicroSIFT evaluation process applied to a microcomputer package (program and related materials) is as follows. A package is identified which is designed for instruction, is complete with supporting documentation, and operates with little or no alteration on a standard microcomputer. Factual descriptive information is collected and recorded on a form. A SIFTnet site is identified to carry out the evaluation. Staff at the site choose at least two teachers at the subject and level of the package to test and evaluate the package. A summary review is completed by a staff person of the network agency who is experienced in the development and use of computer-based instructional materials. In some cases, if more than one institution is involved, the summary is completed by MicroSIFT staff.

FEEDFORWARD MODEL

The process of identifying needed materials in goal number 4 is to operate on both the general and specific levels. At the general level, areas of curriculum will be identified which have high potential for employing microcomputer materials successfully, and which are not currently well-served with such materials. At the specific level, programs or packages will be identified to support student learning at a particular point in a course to meet a certain objective. It is anticipated that in many cases, ideas for needed development will come from individual teachers who are involved in microcomputer use. Such information will also be solicited from SIFTnet members and other school agencies.

A memorandum entitled the Developers Advisory is mailed quarterly to over 200 public and private producers of computer-based packages who have been identified by MicroSIFT staff. This memo includes information on software needs when identified, and additional information about the project. It will also solicit information from producers.

DISSEMINATION

Information concerning clearinghouse plans, activities, progress, services, and outputs will be made available in several ways. One of the primary avenues is the expanding general dissemination capacity being directly supported by NIE: Regional Exchanges, Regional Service Programs and State Capacity-Building Programs. Through those groups, a list of dissemination agencies in most states has been assembled. Reproduction masters of the printed courseware evaluation reports produced by MicroSIFT are provided to the groups on the list and to SIFTnet members for distribution to their constituents. The list for a given state can be obtained from NWREL.

The Evaluator's Guide can be obtained from the ERIC system under ED-206330, or, through ICCE, 135 Education, University of Oregon, Eugene, OR 97403 for $2.50 (less in quantity).

The descriptive and evaluative data collected by MicroSIFT is also entered in a computer database called RICE (Resources In Computer Education). The database can be searched from a computer terminal in the same manner as ERIC searches are conducted. A list of software meeting specifications of hardware, subject, level, audience and other descriptors can be obtained in a few minutes. Further information can be obtained from NWREL.

Finally, a series of occasional reports on topics in educational computing of interest to teachers and administrators will be developed, and distributed through the above channels.

microSIFT COURSEWARE DESCRIPTION

NORTHWEST REGIONAL EDUCATIONAL LABORATORY

Title _____ Version Evaluated _____

Producer _____ Cost _____

Subject/Topics _____

Grade Level(s) (circle) pre-1 1 2 3 4 5 6 7 8 9 10 11 12 post-secondary

Required Hardware _____

Required Software _____

Software protected? ☐yes ☐no Medium of Transfer: ☐Tape Cassette ☐ROM Cartridge ☐5" Flexible Disk ☐8" Flexible Disk

Back Up Policy _____

Producer's field test data is available ☐on request ☐with package ☐not available

INSTRUCTIONAL PURPOSES & TECHNIQUES
please check all applicable

- ☐Remediation
- ☐Standard instruction
- ☐Enrichment
- ☐Assessment
- ☐Instructional management
- ☐Authoring
- ☐Drill and practice
- ☐Tutorial
- ☐Information retrieval
- ☐Game
- ☐Simulation
- ☐Problem Solving
- ☐Other _____

DOCUMENTATION AVAILABLE
circle P (program) S (supplementary material)

- P S Suggested grade/ability level(s)
- P S Instructional objectives
- P S Prerequisite skills or activities
- P S Sample program output
- P S Program operating instructions
- P S Pre-test
- P S Post-test
- P S Teacher's information
- P S Resource/reference information
- P S Student's instructions
- P S Student worksheets
- P S Textbook correlation
- P S Follow-up activities
- P S Other _____

OBJECTIVES ☐Stated ☐Inferred

PREREQUISITES ☐Stated ☐Inferred

Describe package CONTENT AND STRUCTURE, including record keeping and reporting functions

use back for more space

microSIFT COURSEWARE EVALUATION

NORTHWEST REGIONAL EDUCATIONAL LABORATORY

Package title _____ Producer _____

Evaluator name _____ Organization _____

Date _____ ☐ Check this box if this evaluation is based partly on your observation of student use of this package

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not applicable
Please include comments on individual items on the reverse page.

CONTENT CHARACTERISTICS

(1)	SA	A	D	SD	NA	The content is accurate.
(2)	SA	A	D	SD	NA	The content has educational value.
(3)	SA	A	D	SD	NA	The content is free of race, ethnic, sex and other stereotypes.

INSTRUCTIONAL CHARACTERISTICS

(4)	SA	A	D	SD	NA	The purpose of the package is well defined.
(5)	SA	A	D	SD	NA	The package achieves its defined purpose.
(6)	SA	A	D	SD	NA	Presentation of content is clear and logical.
(7)	SA	A	D	SD	NA	The level of difficulty is appropriate for the target audience.
(8)	SA	A	D	SD	NA	Graphics/color/sound are used for appropriate instructional reasons.
(9)	SA	A	D	SD	NA	Use of the package is motivational.
(10)	SA	A	D	SD	NA	The package effectively stimulates student creativity.
(11)	SA	A	D	SD	NA	Feedback on student responses is effectively employed.
(12)	SA	A	D	SD	NA	The learner controls the rate and sequence of presentation and review.
(13)	SA	A	D	SD	NA	Instruction is integrated with previous student experience.
(14)	SA	A	D	SD	NA	Learning can be generalized to an appropriate range of situations.

TECHNICAL CHARACTERISTICS

(15)	SA	A	D	SD	NA	The user support materials are comprehensive.
(16)	SA	A	D	SD	NA	The user support materials are effective.
(17)	SA	A	D	SD	NA	Information displays are effective.
(18)	SA	A	D	SD	NA	Intended users can easily and independently operate the program.
(19)	SA	A	D	SD	NA	Teachers can easily employ the package.
(20)	SA	A	D	SD	NA	The program appropriately uses relevant computer capabilities.
(21)	SA	A	D	SD	NA	The program is reliable in normal use.

QUALITY

Write a number from 1 (low) to 5 (high) which represents your judgement of the quality of the package in each division:

____ Content

____ Instructional Characteristics

____ Technical Characteristics

RECOMMENDATIONS

- ☐ I highly recommend this package.
- ☐ I would use or recommend use of this package with little or no change. (Note suggestions for effective use below.)
- ☐ I would use or recommend use of this package only if certain changes were made. (Note changes under weaknesses or other comments.)
- ☐ I would not use or recommend this package. (Note reasons under weaknesses.)

Describe the potential use of the package in classroom settings

Estimate the amount of time a student would need to work with the package in order to achieve the objectives:
(Can be total time, time per day, time range or other indicator.)

Strengths:

Weaknesses:

Other comments:

Northwest Regional Educational Laboratory

RICE

Resources in Computer Education

microSIFT

300 S. W. Sixth Avenue, Portland, Oregon 97204 (503) 248-6800

What is RICE?

RICE, Resources in Computer Education, is an information base designed to provide information about the state of the art in the application of computers in schools. It is a database installed in the computer of Bibliographic Retrieval Services, Inc. (BRS) in Latham, New York. It was designed by the staff of the Northwest Regional Educational Laboratory, with support from the National Institute of Education.

At present, two categories of information comprise the database:

- Producers, which includes commercial and noncommercial producers of computer-based instructional and administrative software
- Software Packages, which contains descriptive and evaluative information about known products from producers

Descriptive information is being entered on all known software products for education. Evaluation data is entered on those products for which it is available. Complete data from MicroSIFT evaluations is included, and bibliographic references are cited for other sources of evaluative data.

Additional categories of information will be added to RICE during 1983. Producer and Software categories will also be updated and enlarged on a regular basis as new information is available.

How does one gain access to RICE?

It is anticipated that most of the direct access to RICE will be by organizations such as intermediate education units and state education agencies which provide search services to their constituent districts or schools. Any library or other center that provides ERIC search services using the BRS system could also access RICE if they wish.

To conduct searches, three things are required: (1) the agency must be a subscriber to BRS, Inc.; (2) the agency must have computer terminal equipment; (3) the agency will need a staff member trained or experienced in searching databases.

1. Subscription. If not already a subscriber, the easiest method is for the agency to join the School Practices Information Network (SPIN). There is a one-time cost of $150 to join SPIN. Applications can be obtained from BRS, Inc., 1200 Route 7, Latham, New York 12110, (518) 783-1161 or from local representatives of Scott, Foresman and Company.

BRS will issue an identification number and password, and provide an information packet on access and search procedures, training opportunities and other information. A local telephone number will be available in most cities to access the computer without a long distance call.

2. Terminal Equipment. To conduct searches, an agency will need either of the following two devices:

   - o A computer terminal, either a printing terminal or CRT with printer.

   - o A microcomputer with communications interface hardware, a communications modem, and a terminal emulator software package to make the microcomputer act as a terminal.

   If using a microcomputer, work closely with the micro vendor to obtain the proper hardware and software, since they vary with the brand of micro. The cost of the added equipment and software will be at least $300. NWREL cannot assist you on the phone with any problems related to your terminal or software.

3. Staff Training. RICE searches proceed in much the same manner as an ERIC search. Search training sessions are available for a fee in major cities from BRS on a schedule provided by them. Manuals and search guides may be purchased from BRS. Agencies can sometimes arrange for training locally from experienced searchers in libraries or university ERIC search centers. NWREL cannot give this training on the phone.

What is the cost of retrieving information from RICE?

A typical search is expected to cost $4-$5. Search cost is a combination of communications, computer time and database fees. They are all hourly rates, prorated by actual time online, and billed by BRS. Communications costs range $6-$11 per hour and computer time is $18 per hour. There is no charge at present for the RICE database. Thus, search costs range from $24 to $29 per hour. A fee for the database will be established at some time in 1983.

A less expensive subscription arrangement is BRS/AFTER DARK, which offers access only between 6 p.m. and midnight, E.S.T. The cost is $50 one-time registration fee and $6 per hour computer time, plus telecommunications costs as above.

Excerpted from BRS Newsletter, Vol. 6, No. 9, September, 1982

USING YOUR MICROCOMPUTER AS A TERMINAL

Virtually any microcomputer can be used as a communicating data terminal, thus permitting access to BRS without the purchase of a separate terminal. Accessories necessary to convert micros to terminals vary from computer to computer. Usually a telephone modem (modulator/demodulator), a communications interface or card, and a terminal emulator software package are needed. The following technical requirements must be met when configuring a microcomputer to interface with BRS:

- o Baud Rate -300 or 1200 baud
- o Parity -Off or Zero (0)
- o Duplex -Half or Full
- o Data Length -7 data bits & 1 stop bit

A few of the popular microcomputers and accessories needed to access BRS are listed below:

MICROCOMPUTER EQUIPMENT REQUIREMENTS TO INTERFACE WITH BRS

MICROCOMPUTER	NECESSARY HARDWARE/SOFTWARE
APPLE II	Telephone modem and communications card, or Hayes Micromodem II, and terminal software.
APPLE II PLUS	Modem, communications card and terminal software.
ATARI 400/800	ATARI 850 Interface module, modem, and software.
COMMODORE PET/CBM	IEEE Interface, modem, and terminal software.
IBM PERSONAL COMPUTER	Modem, communications adapter, and optional terminal software.
TEXAS INSTRUMENTS 99/4, 99/4A	RS-232 interface, modem, and terminal EMULATOR II software cartridge.
TRS-80 Model I	RS-232 interface board, expansion interface, modem, and RS Term software OR Special RS 925-1172) modem and software.
TRS-80 Model II	Modem and RS-232 cable. Software optional.
TRS-80 Model III	RS-232 interface board, modem, and RS Term software.
Most CP/M-based microcomputers	Telephone modem and RS-232 port.

When configuring a microcomputer as a terminal, a consultation with the hardware/software dealer is imperative. BRS Customer Service offers assistance as well. Please have all hardware and terminal software documentation readily available when calling to facilitate answers and avoid trial and error.

RICE Data Entry Form
SOFTWARE

Accession Num ..AN-|_|_|_|_|_|_|

Resource Type ..RT-b

Title ..TI-_____

Description ..T1-_____

_____

_____

Producer Name ..PD-_____

Year Published ..YR-|_|_|

Address ..CI-_____

_____

Phone ..C1-|_|_|_|/|_|_|_|-|_|_|_|_|

Person (contact) ..C2-_____

Cost ..C3-_____

Addit. Avail. ..C4-_____

_____

Hardware Type ..HT-__Apple II __TRS-80 I __TRS-80 III __Atari 400 __PET
__Apple III __TRS-80 II __TRS-80 Color __Atari 800 __IBM
__Other_____

System Req.:
Hardware ..SR-_____

_____

Software ..R1-_____

Medium ..R2-__5¼in. disk __8in. disk __ROM cartridge __Tape cassette
__Other_____

ERIC Descr. ..DE-_____

_____

_____

Identifiers ..ID-_____

Grade Level (circle approp. #s) ..GL-Pre-1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Post Sec.

Modes:
Purposes ..MI-__standard instruction __remediation __enrichment
__assessment

Techniques ..M1-__drill and practice __tutorial __game __simulation
__problem solving __learning management __utility
__information retrieval __other_____

Objectives ..II-_____

_____

Prerequisites ..I1-_____

_____

_____

Student Time ..I2-_____

_____

Abstract ..AB- (see attached)

Evaluation

Strengths ..EV- (see attached)

Weaknesses ..V1- (see attached)

Site/Date ..V2-_____

_____

Other Data ..V3- (see attached)

Evaluation Summary ..ES-___, a b c

Text Correlation ..TC- (see attached)

Notes ..NT-

RICE Data Entry Form

PRODUCERS

RICE Entry_____
Mailing List _____
Blue Book_____
File Folder_____

Accession Num ..AN-_____

Resource Type ..RT-a

Producer Name ..PD-_____

Address ..CI-_____

_____

Phone ..C1-_____

Contact Person ..C2-_____

Hardware Type ..HT-__Apple II __TRS-80 I __TRS-80 III __Atari 400 __PET
__Apple III __TRS-80 II __TRS-80 Color __Atari 800 __ IBM
__Other_____

ERIC Descr. ..DE-

__Administration
__Attendance
__Student-Records
__Grading
__Scheduling
__Testing
__Finance
__Personnel
__Facilities

__Computer-Managed-Instruction

__Libraries

__Preschool-Education
__Elementary-Education
__Primary-Education
__Intermediate-Grades
__Middle-Schools
__Junior-High-Schools
__High-Schools
__Secondary-Education
__Postsecondary-Education
__Other_____

__Instruction
__Athletics
__Art
__Basic Skills
__Business-Education
__Computer-Science
__Consumer-Education
__English
__Health-Education
__Home-Economics
__Industrial-Arts
__Language-Arts
__Languages
__Mathematics
__Music
__Physical-Education
__Reading
__Sciences
__Social-Studies
__Vocational-Education

Identifiers ..ID-__CMI
__Authoring-Systems
__Programming-Languages
__Other_____

Grade Level (circle approp. #s) ..GL-Pre-1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Post Sec

Abstract ..AB-_____

_____

_____

State ..ST-_____

Notes ..NT-

You Can Bank On It

PRODUCER: Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff of NWREL and of constituent districts of Multnomah ESD, Oregon.

VERSION: MCE120-81

COST: $285.00

ABILITY LEVEL: Special needs learner—youth to adult
SUBJECT: Basic Living Skills: banking services
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, color monitor or TV with adapter (B & W will work), one disk drive
REQUIRED SOFTWARE: Applesoft Basic; DOS 3.2 or 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, student worksheets, follow-up activities

INSTRUCTIONAL OBJECTIVES: Goals: To increase knowledge of the two major banking skills of savings and checking; to increase skill in implementing savings and checking accounts. Objectives: The learner will be able to: present two reasons orally for initiating a savings and/or checking account; fill out a signature card, a savings deposit slip, a savings withdrawal slip, and a check; complete accurately a checkstub record on amounts of checks written; and tell the reason for not writing checks for more money than one has in the bank.

INSTRUCTIONAL PREREQUISITES: The learner must be able to physically type one key at a time, to read certain of the keys, to add and subtract money (or use a calculator), and to type out some information from memory or from printed information supplied by the instructor. A list of required vocabulary is included with the package.

CONTENT AND STRUCTURE: This program introduces the concept of a bank through interaction with presentations on the banking services of checking and savings. The learner is provided opportunities to apply the newly acquired knowledge. The program consists of six parts, each on its own disk. Sequential order is imperative. Several parts require paper and pencil worksheets (included), to be done along with them or between parts. Material is at three reading levels, with branching between levels occurring automatically depending on user responses. Entry level on each disk is at the

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made (Note Major Weaknesses). NOTE: The producer indicates a revision of this package is in progress.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

You Can Bank On It, continued

Grade 4/5 reading ability (highest level). User has unlimited response time in each part, but must complete an entire part at one sitting or start again at the beginning of that part. The program is well documented in an accompanying 3-ring binder with follow-up activities including supplementary follow-up worksheets with answers.

ESTIMATED STUDENT TIME REQUIRED:
Minimum of 2 hours

POTENTIAL USES: The package is appropriate for adult and young adult learners needing basics of banking. It provides a good review of concepts previously learned in a classroom setting. It can also be used for independent study, competency based activity and prework for field trip. It is not recommended for school students without changes in visuals and more background and information about banking systems.

MAJOR STRENGTHS: The content is very useful. Objectives are clearly defined and present little or no deviation. Technical quality is good, especially when the reading level changes. Remediation is good, as is progression. Excellent feedback is provided, which is immediate and less complex.

MAJOR WEAKNESSES: Too much information is presented at once for target audience. Many models of registers and statements are over-simplified. Some visuals are confusing and hard to read. The flashing "R" tends to hurry the user. Inability to stop in the middle of a disk and return to that point later might be a problem for some users.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Money Management Assessment Series

PRODUCER: Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff of NWREL and of constituent districts of Multnomah ESD, Oregon.

VERSION: MCE1401-81

COST: $165.00

ABILITY LEVEL: Special needs—youth to young adult
SUBJECT: Basic Living Skills: money management
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, disk drive, color monitor or TV w/adapter (B&W will work), printer optional
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Assessment package
INSTRUCTIONAL TECHNIQUES: Assessment package
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, student worksheets, answers to worksheets

INSTRUCTIONAL OBJECTIVES: Goals: To determine the skills, concepts and vocabulary of learners, and to determine where the learner may be having difficulty.
Objectives: At the conclusion of each part, the instructor will be able to know the terms, concepts, and skills to which the learner responded correctly and incorrectly; have printed results of responses; and have an error analysis of skill deficiencies.

INSTRUCTIONAL PREREQUISITES: The guide lists specific keys the learner must know, and terms the learner must understand prior to running the program. Some supportive materials provide a means to assess the learner's ability to comprehend these words.

CONTENT AND STRUCTURE: The program assesses basic skills, concepts and vocabulary needed to learn money management concepts and functions. It consists of 4 parts (each on its own disk): vocabulary concepts, calendar concepts and math skills for money management. User may choose any sequence of parts. After each part assessment results are presented and may be printed. Each part is entered at a 4th/5th grade reading level; learner's responses determine the level after that. Inappropriate responses branch the user to a lower level (low 3rd/high 2nd grade). After branching down 5 times, the program stays at the lower level. Each part consists of user instructions followed by a sequence of problems. Program keeps track of

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
			•		Graphics/sound/color are used appropriately.
				•	Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package only if certain changes were made (Note Major Weaknesses). NOTE: The producer indicates a revision of this package is in progress.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Money Management Assessment Series, continued

which were answered correctly and which not, then provides a report at the conclusion. Rate of response is controlled by the user and a lower reading level form of the question is obtained by answering "DK" (Don't Know) or "HELP". The program is very well documented in a 3-ring binder with followup activities including worksheets for both program use and followup.

ESTIMATED STUDENT TIME REQUIRED: 2 hours

POTENTIAL USES: The package is useful to provide instructors with specific information regarding learner needs in areas related to money management.

MAJOR STRENGTHS: The package makes good use of branching. Material relevant to "everyday living" is covered. It helps user work problems on the screen in logical fashion.

MAJOR WEAKNESSES: Some reviewers found program irritatingly slow. Audio associated with "HELP" should be eliminated; the user can attract the instructor's attention. Certain features can be confusing: "DK" looks like "OK"; the percent symbol looks like ÷; some examples omit the second decimal place in dollars and cents expressions, e.g., $132.1; when user makes a correction, the answer being corrected doesn't immediately disappear; some instructions on entering answers to math problems are confusing. Certain material seems irrelevant to issue at hand: naming months and days; extensive instruction in using decimals made reviewer lose sight of focus of exercises. User can outguess the system. (If the first two responses are correct, user can guess the third; thus the third word or concept isn't being truly tested.) Graphics of checks, deposit slips, etc. don't look realistic. Package seems to confuse some instruction with assessment. Routine for entering decimal location during multiplication does not allow for inadvertent errors on punching wrong key. (User is unable to correct a known error. Since all it is doing is keeping track of right and wrong, this is a design flaw.)

Permission to reproduce this document is hereby granted.

Home Safe Home

PRODUCER: Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff of NWREL and of constituent districts of Multnomah ESD, Oregon.

VERSION: MCE1301-81

COST: $165.00

ABILITY LEVEL: Special needs learners—youth to adult
SUBJECT: Basic Life Skills: safety around the home
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, color monitor or TV with adapter (B & W will work although package has extensive color graphics), one disk drive
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, followup activities

INSTRUCTIONAL OBJECTIVES: Goals: To increase knowledge on the hazards found in the home and on preventive techniques. Objectives: The learner will be able to: define home hazards; name the four major hazard categories; define each of these categories; list home hazards that fall into each of the categories; verbally explain techniques for preventing each of the home hazards listed.

INSTRUCTIONAL PREREQUISITES: The learner must be able to read symbols on the keyboard and to physically run the program by pressing the appropriate keys. The learner should have a reading level of at least second grade. A list is provided for the instructor to assess student's ability to read and understand terms and concepts.

CONTENT AND STRUCTURE: This safety program highlights the major household hazards of fire, electrical shocks, falls and poisoning. Preventive suggestions are emphasized. The program consists of 4 parts, each on its own disk. Sequential order is recommended. Information is presented with extensive use of color graphics and sound, along with frequent interaction with the user to determine comprehension. Each part presents material at three reading levels, with automatic branching between levels depending on user responses. Entry level on each disk is at the Grade 4/5 reading ability (highest level). User has unlimited response time in each part, but must complete an entire part in one sitting or start again at the beginning of that part. The program

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend this package unless no other method was available. (Note reasons under major weaknesses.) NOTE: The producer indicates a revision of this package is in progress.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Home Safe Home, continued

is well documented in an accompanying 3-ring binder with followup activities, including supplementary followup worksheets with answers.

ESTIMATED STUDENT TIME REQUIRED: 1-1/2 hours

POTENTIAL USES: This seems to be a well done, but trivial, use of a microcomputer to present information. It could be useful for the target audience if the required hardware is available already, but does not appear to be worth the expenditure.

MAJOR STRENGTHS: The program covers important material. The use of branching if reading level difficulties are encountered is excellent. Material is clearly and simply presented with the amount of reading kept to a minimum (however at some cost; see weaknesses). Graphics are generally effective, with one or two exceptions.

MAJOR WEAKNESSES: Feedback is not provided to specific responses; hence the learner is not made aware of the consequences of the given incorrect response. Questions are often transparent—the correct answer easily guessed without viewing the instruction. Correctly typing "NO" in response to a question yields a "you must type yes or no" instruction the first time the user attempts to reply to each question on the first half of Disk I. Content is marred by several instances of faulty English usage. Once branched down to the lowest level on Disk I the user is branched back to the highest level at the start of the second half of the disk.

Job Readiness—Assessment and Development

PRODUCER: Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff of NWREL and of constituent districts of Multnomah ESD, Oregon

VERSION: MCE1501-81

COST: $165.00

ABILITY LEVEL: Special needs learner—youth to adult
SUBJECT: Basic Life Skills: assessment and development of skills necessary to acquire and hold a job
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, disk drive, color monitor or TV w/adapter (B&W will work), printer optional
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Tutorial, assessment
DOCUMENTATION AVAILABLE: In Computer Program: programoperating instructions, pre-test, post-test, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, follow-up activities

INSTRUCTIONAL OBJECTIVES: Goals: To provide instructor with assessment data about learner attitudes necessary for job success; develop positive job attitudes needed for job success; increase knowledge for successful completion of applications and interviews; and increase knowledge of agencies which assist in job placement. Objectives: The learner will: increase job attitude by at least 5 points if the score was 15 or less on the first half of Part I; be able to fill out a job application; successfully role play an interview; be able to list at least 3 agencies that help people find jobs, and verbally explain the services of each.

INSTRUCTIONAL PREREQUISITES: The learner must be physically able to type keys one at a time and must be familiar with certain keys. A list is provided of vocabulary words with which the student must be familiar.

CONTENT AND STRUCTURE: The package combines the techniques of assessment and instruction to develop job readiness. It provides practical knowledge for filling out applications and locating placement agencies as well as tips for successful job interviews. The program consists of 4 parts, each on its own disk, with optional sequential order. Part 1 contains an assessment aspect; results may be sent to a printer. Parts 2-4 present information in text

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package only if certain changes were made (Note Major Weaknesses). NOTE: The producer indiates a revision of this package is in progress.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Job Readiness—Assessment and Development, continued

form with frequent learner interaction. Each part is presented at three reading levels (Part 1 has only 2 levels) with automatic branching between levels based on user responses. Entry level on each disk is at Grade 4/5 reading ability (highest level). User has unlimited response time in each part, but must complete an entire part at one sitting or start again at the beginning of that part. The program is well documented in a 3-ring binder with followup activities including a sheet for the teacher to record learner's post-test results, and worksheets for followup use.

ESTIMATED STUDENT TIME REQUIRED: 1-1/2 hours

POTENTIAL USES: This package is for use in a career class, resource room or career center. In a classroom, students would benefit most from using it for review or preview of a module to be covered, for remediation for slow students, or for students absent when material was covered in class. It is best used with experiential types of career exploration and job search technique exercises, especially with students having very little work experience or exposure to career information.

MAJOR STRENGTHS: The package gives accurate information on important attitudes, job applications, interviews, and places to look for jobs. It defines terms and explains answers well and reinforces definitions and responses. "Help" response simplifies and clarifies information. Disk III on job interviews is extremely well done. Branching between reading levels when necessary is helpful.

MAJOR WEAKNESSES: Students must do an entire disk at a sitting or repeat the material every time; this requires a much longer attention span than is normal for the "special needs" target audience. If a response is in error for reasons other than low reading ability, the repeat process can be so slow that it becomes boring. Corrections can be too long and detailed. On Disk I the student can "see through" questions and know what should be answered. On later disks, the number of blanks give away the answer. The term Employment Security Commission does not exist in all states as the disk program indicates.

The inferred definition of "skills" lists job duties and areas of work instead of transferrable skills. Because of the target audience's lack of experience or training, it is important to emphasize functional skills. The text is often too wordy, and spacing and graphics too crowded when asking for responses.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Poison Proof Your Home

PRODUCER: Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff of NWREL and of constituent districts of Multnomah ESD, Oregon

VERSION: MCE1001-81

COST: $210.00

ABILITY LEVEL: Special needs learner—youth to adult
SUBJECT: Life Skills: poisons—what they are and how to deal with them
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, color monitor or TV with adapter (B & W will work)
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, student worksheets, follow-up activities, answers to followup activities

INSTRUCTIONAL OBJECTIVES: Goals: To gain knowledge about poisons in the home and what to do if a poisoning occurs. Objectives: The learner will be able to: name the four major kinds of poisons, categorize poisons into one of the four main kinds, name the four ways poison can enter the body, determine how various poisons enter the body, identify poisons that can be found in various rooms in the house, tell how a home can be made safer, and tell what to do if a poisoning occurs.

INSTRUCTIONAL PREREQUISITES: Learners must be able to physically type keys one at a time. They should know to push the return key to change frames and the backspace key to erase symbols on the line on which they are typing. A minimum 2nd/3rd grade reading level is suggested. A vocabulary list is provided to help the instructor determine if the learner needs instruction prior to running the program.

CONTENT AND STRUCTURE: This is a concept oriented program describing ways in which one may be poisoned, the four major types of poisons, where poisons are found in the home, preventive techniques and what to do if a poisoning occurs. It especially deals with keeping children safe from poisons. Each of its five parts has material at three reading levels. Branching between levels occurs automatically depending on user responses. Entry level on each disk is at Grade 4/5 reading ability (highest level). User has unlimited response time in each section but must complete an entire section in one sitting or start

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
		•			Content is accurate.
	•				Content has educational value.
		•			Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
					Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made (Note Major Weaknesses). NOTE: The producer indicates a revision of this package is in progress.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Poison Proof Your Home, continued

again at the beginning of that part. The program is well documented in an accompanying 3-ring binder with followup activities including worksheets for followup use.

ESTIMATED STUDENT TIME REQUIRED: 2 hours

POTENTIAL USES: This package could be used for health and safety in Grades 3-7, or as a science or general life skills unit in senior elementary or junior high. It should be used as an introduction or review in conjunction with class work, not as the primary teaching device.

MAJOR STRENGTHS: The program deals with an important topic. It is well designed, carefully structured, well documented and supported. It makes good use of varying reading levels.

MAJOR WEAKNESSES: English usage is often poor in textual presentations. Reading level is often high for lower grade levels, although concepts are appropriate. The program corrects errors by giving correct response and reviewing material — not by getting at the user's error. Feedback on student responses: System lacks a way for the learner to compare his or her response to correct response; feedback comes in response to a group of items — not to each one. One reviewer failed to see any relationships between the "special needs learner" and this package, finding it inappropriate for low achieving learners or economically disadvantaged learners. Some inaccuracies were noted: a response of "that's great" after a mistake; automobile exhaust is invisible; cooking turkeys at low heat will poison you (although there are proper slow cooking methods); one graphic suggesting poisons should be tossed down drains; fumes are invisible; paint is a solid (not made clear in the context).

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

EMSI-6

PRODUCER: Educational Micro Systems, Inc.
P.O. Box 471
Chester, NJ 07930

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: January 1982, by staff members of the West Lafayette School Corporation, West Lafayette, Indiana, with the support of Indiana Title IVc.

VERSION: TRS-80 Model I/III

COST: Disks: $229.95; Cassettes: $199.95

ABILITY LEVEL: Grades 3-9
SUBJECT: Math: addition, subtraction, multiplication, division, fractions and mixed numbers, and logic
MEDIUM OF TRANSFER: 5" flexible disk, tape cassette
REQUIRED HARDWARE: For cassette: TRS-80 I/III, 16K RAM, and tape recorder; for disk: TRS-80 I/III, 32K RAM, interface, and one disk drive (Optional: printer to produce worksheets)
REQUIRED SOFTWARE: For cassette: none (written Level II Basic), programs may be transferred to disks; for disk: TRS-80 Disk Basic
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game, testing
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: suggested grade/ability level(s), sample program output, program operating instructions, pre-test/post-test (can generate worksheets for pre- and post-tests), teacher's information, student's instructions, student report forms

INSTRUCTIONAL OBJECTIVES: These programs were developed to teach various math functions. They should not be used to replace generally accepted methods of introducing students to the math concepts, but rather to shorten the period of time from initial awareness of a concept to mastery of the related computational skills. The programs use guided interactive practice sessions with step-by-step assistance and reward for success.

INSTRUCTIONAL PREREQUISITES: The student must be able to read instructions, make choices on tasks, have some typing skill. If not aided by the teacher, the learner needs a fairly large math vocabulary.

CONTENT AND STRUCTURE: A set of cassette tapes or disks and documentation are bound in a three-ring binder. The entire package contains whole number addition, subtraction, multiplication and division; fractions and mixed numbers; logic and deduction; metric/English conversion. Each of the whole number parts operates with the same options: number of digits in the operands, number of problems, practice or

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

EMSI-6, continued

test mode (timing possible), student assistance (digit by digit or retry) and rewards (graphic displays). Scores and records of problems are stored. Fractions and mixed numbers calculate answers from numbers provided by the student. Students must be sure to enter appropriate numbers. Logic and Deduction is a modified version of Mastermind, which may be played as a game. Series of trial and error guesses teach logic. Metric/English program converts numbers entered by the student. This program does not question or instruct.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The number programs can be used to shorten the period of time to attain mastery of computational skills. The step-by-step assistance is especially helpful in teaching skills (division) to low ability students. In fact, low ability students may be the most cost effective group to use the computer to learn these skills. The logic and deduction programs can be used by individual students or by a teacher interacting with a whole class. (This procedure solves the problem of the time-dependent nature of this program.) The Metric/English program can be used in a science lab to get immediate conversions or to let students check computations; however, conversion tables would do the same more cheaply.

MAJOR STRENGTHS: These programs are "user friendly" and well documented. Students like the guidance of the assistance option. A wide range of problems is featured with possibility of specific prescriptions for student deficiencies. The option of generating a hard copy test or drill sheets makes this package a practical choice for the limited budget.

MAJOR WEAKNESSES: At times instructions are confusing to low ability students. Many students will need help entering the proper codes to get the desired problems. Some students are confused because answers are entered from right to left as you would work a problem and not left to right as you would write an answer.

Permission to reproduce this document is hereby granted.

Income Meets Expenses

PRODUCER: Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff of NWREL and of constituent districts of Multnomah ESD, Oregon.

VERSION: MCE1101-81

COST: $340.00

ABILITY LEVEL: Special needs learner—youth to adult
SUBJECT: Life Skills: budgeting
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, color monitor or TV with adapter (B & W will work)
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, pre-test, post-test, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, resource/reference information, student worksheets, follow-up activities, answers to supplementary worksheets

INSTRUCTIONAL OBJECTIVES: Goal: To increase knowledge of and skill in budgeting. Objectives: The student will be able to: define the terms budget, income and expenses, needs and wants as they relate to budgeting, and fixed and unfixed expenses; place items correctly in the columns of: Income, Fixed Expenses, or Unfixed Expenses; compute and put in the correct column the totals for these items; determine the correct column in which to place items and then total these columns; determine if total expenses or income is greater and then determine if income does meet expenses.

INSTRUCTIONAL PREREQUISITES: Learners should be able to type correct answers. If they cannot regroup, a calculator should be provided. They should be able to read at a low second grade level and have the visual acuity to read the frames (or have someone read the contents aloud to them). A list is provided of terms learners should know.

CONTENT AND STRUCTURE: This program introduces learners to the concept of budgeting by learning about income and its relationship to fixed and flexible expenses based on needs and wants. Its 8 parts, each on a separate disk, must be used sequentially. Three parts involve paper and pencil worksheets, which are provided. The first 3 parts present a concept, illustrate it with examples and

continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.
NOTE: The producer indicates a revision of this package is in progress.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Income Meets Expenses, continued

then reinforce it through interaction with the program. The remaining 5 parts provide practice implementing the concepts. Material is at 3 reading levels, with branching between levels occurring automatically depending on user responses. Entry level on each disk is at the Grade 4/5 reading ability (highest level). User has unlimited response time in each section but must complete an entire section in one sitting or start again at the beginning of that section. The program is well documented in an accompanying 3-ring binder with followup activities including worksheets for both program use and followup use.

ESTIMATED STUDENT TIME REQUIRED: 3-4 hours

POTENTIAL USES: The package can be used for independent study, small group discussions, competency based education, special needs based on prescription and assessment, or with youth in transition from sheltered to independent living situations. It is not appropriate as the primary teaching device, but rather to supplement or for remedial and/or review.

MAJOR STRENGTHS: Content is presented at 3 reading levels. Information is practical - critical to our lives, thus motivational to employed people. Objectives are well defined, the package provides instant remediation, allows for independent learning and teaching, is reasonably motivational. Activities are brief, concepts are clear, and language is concise.

MAJOR WEAKNESSES: This is not a personalized package; the motivational level would be increased by including references to situations that different audiences may have faced. Sound is distracting and sometimes startling.

Permission to reproduce this document is hereby granted.

Fractions

PRODUCER: Quality Education Designs
P.O. Box 12486
Portland, OR 97212

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: January 1982, by staff and constituents of the Minnesota Educational Computing Consortium; Multnomah ESD, Oregon; and NWREL.

VERSION: 1979

COST: $150.00

ABILITY LEVEL: Middle school, high school
SUBJECT: Mathematics: fractions
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: TRS-80, or 16K Apple II or 32K Apple II, one disk drive, monitor
REQUIRED SOFTWARE: TRSDOS; DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game, assessment
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, pre-test, post-test, student's instructions, followup activities. In Supplementary Materials: suggested grade/ability level(s), prerequisite skills or activities, program operating instructions, teacher's information

INSTRUCTIONAL OBJECTIVES: Students will be able to work with fractions, using them with the following operations/topics: equivalent fractions, fractions to decimals, fractions and measurement, multiplication, addition and subtraction, comparing fractions, mixed numbers, division of fractions, inverses, compound fractions, continued fractions.

INSTRUCTIONAL PREREQUISITES: Students should have informal experience with measuring and naming quantities, both as fractions and as decimals. They should understand factoring, primes, highest common factors, least common multiples. Students should be able to use a calculator and do all operations in whole numbers.

CONTENT AND STRUCTURE: The package consists of 12 topics on six disks. Each topic has an A and B part, the A parts being tutorial with worked examples and opportunity for practice. The B part is a game approach to drill and practice with the concept, or occasionally enriched work with the concept. The placement test included with Topic I can be used as a progress test at any point.

ESTIMATED STUDENT TIME REQUIRED: 12 hours

POTENTIAL USES: The package can be used to support and reinforce teacher's lessons in middle school, to enrich and challenge more able students, and to make drill and practice with these concepts more interesting.

MAJOR STRENGTHS: Creative and original techniques are often used to cover the material in an interesting way. The package makes excellent use of imaginative games to make drill and practice interesting and/or to explore ideas that are not in the standard textbooks. Advanced topics are well used to motivate further work and challenge the better students.

MAJOR WEAKNESSES: Several small bugs and errors have been removed from versions available after January 1982. It tends to be very wordy; the learner has a lot of reading to do on the screen, which sometimes makes for crowded, cramped frames. Documentation and support materials are sparse. The section on division is a little confusing and hard to follow.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Geography Explorer: USA

PRODUCER: Instant Software
Educational Marketing
Peterborough, NH 03458

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: January 1982, by staff members of the West Lafayette School Corporation, West Lafayette, Indiana, with the support of Indiana Title IVc.

VERSION: TRS-80

COST: $49.95

ABILITY LEVEL: Grades 4-11
SUBJECT: Social Studies: U.S. geography, state identification
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K TRS-80, one disk drive, monitor, light pen (optional)
REQUIRED SOFTWARE: TRSDOS or NEWDOS
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, information retrieval
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: sample program output, program operating instructions, teacher's information, resource/reference information, student worksheets, data, progress reports

INSTRUCTIONAL OBJECTIVES: The student will be able to identify states within regions of the U.S., and to associate state name with abbreviation, capital, largest city, nickname, population, flower and bird.

INSTRUCTIONAL PREREQUISITES: The student should know some information about the regions of the U.S., cities and states, and population.

CONTENT AND STRUCTURE: The package consists of one diskette in a 3-ring binder, a teacher/parent guide, sample lesson plans and a lesson plan blank. Data sheets of information contained on the diskette and blank maps of the U.S. are available for teachers to copy and distribute. The computer presents a menu of three program sets: (1) state name, abbreviation, capital, largest city and nickname; (2) state area, area rank, population, population rank, density, density rank, % urban, % urban rank; (3) state flower, bird, tree, song and motto. Each set presents a menu of its parts. The student is given a choice of answering by multiple choice, by given fact, or by typed-in response. The teacher can override the menu choices and the ways of responding.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: This package can be used as a review in an elementary geography class. It can be used for drill on state names, abbreviations, relative location and state facts. Other uses could be enrichment or review for small groups. Perhaps some of the statistical ranking parts could be used in the middle grades.

MAJOR STRENGTHS: The Geography Explorer has a "teacher" mode which allows the teacher to choose the content and how the content is to be presented. This mode permits directed learning. Easy entry and friendly computer responses help the elementary student. A variety of graphic rewards provide immediate positive reinforcement. Student scores can be displayed.

MAJOR WEAKNESSES: Recommended audience age is too young for much of the program content. Elementary students have trouble with most of the content of Set II: state's area, population, density and percent urban. The graphics are not always clear, making it hard to define the shapes of states. Largest city (Set I, Part 4) only lists one city of the state. The other two choices are outside the state. Thus, a student only needs to relate the city to the state to answer the largest city problem.

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
		●			Purpose of package is well defined.
		●			Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
		●			Instruction integrates with prior learning.
	●				Learning can be generalized.
●					User support materials are comprehensive.
	●				User support materials are effective.
		●			Information displays are effective.
	●				Users can operate easily and independently.
●					Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Factoring Whole Numbers

PRODUCER: Quality Education Designs
P.O. Box 12486
Portland, OR 97212

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: January 1982, by staff and constituents of the Minnesota Educational Computing Consortium; Multnomah ESD, Oregon; and NWREL.

VERSION: 1979

COST: $75.00

ABILITY LEVEL: Upper elementary and up
SUBJECT: Mathematics: factoring whole numbers
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: Apple II or TRS-80, one disk drive, B & W monitor
REQUIRED SOFTWARE: TRSDOS, Applesoft, DOS 3.2 or 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game, problem solving
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, student's instructions. In Supplementary Materials: suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information

INSTRUCTIONAL OBJECTIVES: The student will be able to: identify and manipulate prime numbers; define and identify greatest common factors and least common multiple; define and approximate square-root; and understand the concept of exponentiation.

INSTRUCTIONAL PREREQUISITES: The learner should have an understanding of area and perimeter, a minimum Grade 6 math ability, computational facility with multiplication and division of whole numbers, and calculator skills.

CONTENT AND STRUCTURE: The package has three disks containing two lessons each. Each lesson provides instruction, examples, drill and practice and review of essentials for the following topics: factor pairs, pairs and squares, primes and composites, exponents, highest common factors, least common multiples. Each lesson then has a "B part" which is usually a game format for drill and practice presented in an entertaining and often challenging way.

ESTIMATED STUDENT TIME REQUIRED: 6-10 hours

POTENTIAL USES: This package could be used for enrichment in Grades 7 through 12. It could serve as a supplement to instruction in Grades 9 and 10 and possibly Grades 7 and 8 advanced.

MAJOR STRENGTHS: Interesting material is presented in an often novel and creative way. The material encourages student exploration of mathematical ideas and creative problem solving. It often goes far beyond the presentation in a typical textbook. Excellent use is made of games to achieve drill and practice of the concepts. The successive programs require mastery of the material and retention of ideas from previous lessons.

MAJOR WEAKNESSES: Many students will need help to run these programs—not mechanical help, but conceptual help. More teacher support materials are needed. There tends to be too much "lecturing"—a lot of written material presented in screen after screen of text. All bugs found have been corrected in versions available after January 1982.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Shell Games Education Series

PRODUCER: Apple Computer, Inc.
10260 Bandley Drive
Cupertino, CA 95014

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: December 1981, by staff and constituents of the Institute for Educational Research, Glen Ellyn, Illinois and NWREL.

VERSION: 030-0066-00

COST: $29.95

ABILITY LEVEL: Grade 4 through adult
SUBJECT: Teacher Utility
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, B & W monitor
REQUIRED SOFTWARE: DOS 3.2, Integer Basic
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Game, utility
DOCUMENTATION AVAILABLE: In Computer Program: program operating instructions, post-test, teacher's information, student's instructions. In Supplementary Materials: instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, follow-up activities, bibliography

INSTRUCTIONAL OBJECTIVES: As a utility; this package can adapt itself to many instructional objectives.

INSTRUCTIONAL PREREQUISITES: The only prerequisites for this package are the abilities to use keyboard and microcomputer.

CONTENT AND STRUCTURE: This is a utility package which permits a teacher to create his or her own questionnaire: Matching type (The Match Machine); True/False quiz (Professor True); Multiple choice questions (Mr. Multiple). It includes an editor routine which allows the teacher to enter "problems," as well as the game routines which allow students to play the above games using data entered by the teacher.

ESTIMATED STUDENT TIME REQUIRED: Varies — depending upon length of questionnaire teacher enters

POTENTIAL USES: This package could be used in any situation calling for an exercise or game employing matching, true and false, or multiple choice quiz formats. Teachers must prepare their material in advance, and then can easily adapt the program to their own data.

MAJOR STRENGTHS: The package is adaptable to a wide range of materials and instructional objectives. It is easy for students and teachers to use.

MAJOR WEAKNESSES: Better instructions are needed for beginning microcomputer users. Frequent prompts (such as "Relax now," "Are you too tired to continue?" and "Push ESC to stop") almost seem to encourage the student to drop out of the program.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
●					Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
●					Package achieves defined purpose.
	●				Content presentation is clear and logical.
				●	Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
●					Use of package is motivational.
	●				Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
				●	Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
●					Information displays are effective.
●					Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Odell Lake

PRODUCER: MECC Publications
2520 Broadway Drive
St. Paul, MN 55113

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981, revised February 1, 1982

VERSION: 4.3

COST: Varied; sold in package of several programs on a disk at $30 per disk, or available through institutional subscription

ABILITY LEVEL: Grades 4-10
SUBJECT: Science: biology/food chains
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving
DOCUMENTATION AVAILABLE: Suggested grade/ability level, instructional objectives, prerequisite activities, sample program run, program operating instructions, teacher's guide, teacher's resource guide, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: Understand concept of food web; identify 1st, 2nd, 3rd order of consumers on web; explain role of each animal and indicate effects of man on lake and lake on man; define words related to food web.

INSTRUCTIONAL PREREQUISITES: Program assumes that students have been introduced to food chains and webs and provided with definitions of necessary terms.

CONTENT AND STRUCTURE: This is a simulation using the discovery approach. Students learn about food chains by assuming the identity of each fish in the lake and making choices about behavior.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: Depending on student's ability and background, the program could be used in a regular or accelerated classroom with small groups of students or with the entire class.

MAJOR STRENGTHS: Students are given clear, immediate, and reinforcing feedback. Simulation activities appropriately involve students. Graphics are well done.

MAJOR WEAKNESSES: None cited.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Arithmetic Racing

PRODUCER: Math Software
1233 Blackthorne Place
Deerfield, IL 60013

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981; Revised 2/1/82

VERSION: © 1980

COST: Not sold individually; sold in packages of 5 to 10 programs ranging from $100 to $250

ABILITY LEVEL: Grades 4-11
SUBJECT: Mathematics: speed and accuracy drill of arithmetic operations
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II or II Plus, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Game, problem solving, drill and practice
DOCUMENTATION AVAILABLE: Suggested grade level, program operating instructions, demonstration

INSTRUCTIONAL OBJECTIVES: To improve students' arithmetic skills in addition, multiplication, subtraction, and division; to provide an interesting interactive environment for remediation work in arithmetic facts; and to develop speed and accuracy in working basic arithmetic operations.

INSTRUCTIONAL PREREQUISITES: The program assumes that students know basic arithmetic facts concerning the operations of addition, multiplication, subtraction and division. Students also need to understand the rules governing the operation of the computer game.

CONTENT AND STRUCTURE: ARITHMETIC RACING is a game of timed arithmetic practice for students Grades 4-11. Players first select addition, subtraction, multiplication, or division and then specify the largest number they want the computer to give them. Players also select a speed level from 1-5. The computer then assigns a point value to each problem based on these selections. A 25 point bonus is added to the score for answering each of the ten questions correctly.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used in a classroom setting to provide drill and practice in basic arithmetic operations.

MAJOR STRENGTHS: The game format offers an incentive for students needing drill and practice in arithmetic operations.

MAJOR WEAKNESSES: None cited.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Limacons and Their Areas

PRODUCER: Math Software
1233 Blackthorne Place
Deerfield, IL 60013

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981; Revised 2/1/82

VERSION: © 1980

COST: Not sold individually; sold in packages of 5 to 10 programs ranging from $100 to $250

ABILITY LEVEL: Grades 11-14
SUBJECT: Mathematics: graphs of limacons with area approximations
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II or II Plus, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, demonstration
DOCUMENTATION AVAILABLE: Suggested grade level, program operating instructions, description

INSTRUCTIONAL OBJECTIVES: To demonstrate the curves formed by r=a+b cos(t) and r=a+b sin(t); to demonstrate graphically the effects of changing "a" and "b" in these equations; to define and show by example the family of curves known as limacons; to reinforce polar graphing techniques; and to describe areas of polar curves from a sector summation approach.

INSTRUCTIONAL PREREQUISITES: The program assumes that students understand polar coordinates, polar graphing techniques, radian measure of angles, and the functions sin(t), cos(t) and their graphs.

CONTENT AND STRUCTURE: The program consists of three parts. The first section describes limacons whose equations are r=a+b sin(t) or r=a+b cos(t). The effects of changing the values of "a" and "b" are described in written form and also shown graphically. The effects of using the sine function or the cosine function are also shown. The second section allows students to choose the values of a and b and cosine or sine. The program then graphs the limacon on the hi-resolution screen. The third section allows students to calculate various areas enclosed by the limacon. The program will give an approximate value of this area.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used effectively in a classroom setting to demonstrate graphs of limacons.

MAJOR STRENGTHS: The program provides a good demonstration and reinforcement of polar graphing techniques.

MAJOR WEAKNESSES: None cited.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Arithmetic of Functions

PRODUCER: Math Software
1233 Blackthorne Place
Deerfield, IL 60013

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981; Revised 2/1/82

VERSION: © 1980

COST: Not sold individually; sold in packages of 5 to 10 programs ranging from $100 to $250

ABILITY LEVEL: Grades 9-14
SUBJECT: Mathematics: addition, multiplication, subtraction, division of functions
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II or II Plus, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Problem solving, demonstration
DOCUMENTATION AVAILABLE: Suggested grade level(s), program operating instructions, description

INSTRUCTIONAL OBJECTIVES: To demonstrate graphically the combining of two functions using arithmetic operations and the resulting effect on the graph; to demonstrate graphically limiting processes and trigonometric identities; to enable the teacher to create elaborate graphs; to illustrate functional relationships via two-dimensional graphing.

INSTRUCTIONAL PREREQUISITES: The program assumes that students have good understanding and graphic knowledge about various mathematics functions including algebraic, polynomial, trigonometric and logarithmic functions, and know definitions of addition, subtraction, multiplication, and division relative to specific mathematics functions. If the program is to be used to demonstrate limits, students should understand the limit concept. If the program is to be used to show trigonometric identities, students should have prior knowledge of these trigonometric identities.

CONTENT AND STRUCTURE: The program provides a display of the computer potential in function graphing. There are eight menu selections for each function followed by four choices for the operation. The menu selections generate graphic verification of certain trigonometry relationships including a double angle formula, some half-angle formulas, and some quotient relationships. The program also includes an option for user-supplied functions.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used effectively in a classroom to demonstrate addition, multiplication, subtraction, and divison of functions.

MAJOR STRENGTHS: The program displays the graphing in different colors.

MAJOR WEAKNESSES: None cited.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Typing Tutor

PRODUCER: Microsoft Consumer Products
400 108th Avenue N.E.
Bellevue, WA 98004

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981

VERSION: Apple II/Radio Shack TRS-80

COST: Cassette: $14.95; disk: $19.95

ABILITY LEVEL: Grades 8-12
SUBJECT: Business Education: typing
MEDIUM OF TRANSFER: 5" flexible disk, tape casette
REQUIRED HARDWARE: 32K Apple II or II Plus, one disk drive, monitor; or 16K Apple II or II Plus, cassette player, monitor; or 16K TRS-80 model I, cassette player
REQUIRED SOFTWARE: Applesoft Basic (disk version); Integer Basic (cassette version); Level II Basic (TRS-80)
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, simulation
DOCUMENTATION AVAILABLE: Instructional objectives, program operating instructions, teacher's guide

INSTRUCTIONAL OBJECTIVES: Teach students how to type; increase typing speed and efficiency.

INSTRUCTIONAL PREREQUISITES: None cited.

CONTENT AND STRUCTURE: Package consists of one program that uses drill and practice to teach beginners how to use the standard typewriter keyboard. Paragraph typing exercises are used throughout the activity.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used effectively as a refresher typing course for students who need to increase speed and efficiency. It may also be used as a learning station in a regular classroom.

MAJOR STRENGTHS: The program is easy for students to use and provides non-threatening feedback. Computer terms are introduced as part of the typing exercises. Students can expect to learn the keyboard with moderate proficiency. Speed in WPM is introduced and developed early in the program.

MAJOR WEAKNESSES: The program manual is incomplete. The use of nonsense syllables in typing exercises is not necessary; words are more appropriate for students to type. Students will have difficulty making symbol and key transition from computer keyboard to regular typewriter. The documentation needs more illustrations showing how the fingers strike the various keys. In addition, documentation is not explicit about how to exit program. Teaching eight characters per learning exercise is not enough; a minimum of 16 is necessary to ensure development of a stroking pattern. Students should not be penalized if they leave space at the end of a line. The program is inadequate for acquiring comprehensive typing proficiency; program lacks other important typing skills, e.g., letter forms, tab settings, centering.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
•					Purpose of package is well defined.
		•			Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
		•			Learning can be generalized.
			•		User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made (Note Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Circulation (Organs)

PRODUCER: Micro Power and Light Company
Keystone Park, Suite 1108
13773 N. Central Expressway
Dallas, TX 75243

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981

VERSION: Apple II

COST: $29.95

ABILITY LEVEL: Grades 5-12
SUBJECT: Science: human circulatory system
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II Plus, one disk drive, color monitor
REQUIRED SOFTWARE: DOS 3.2, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game
DOCUMENTATION AVAILABLE: Suggested grade/ability level, instructional objectives, program operating instructions, teacher's information

INSTRUCTIONAL OBJECTIVES: To teach the functions of the organs of the circulatory system.

INSTRUCTIONAL PREREQUISITES: Teacher should go through the instructional cycle with the student prior to using. Students need a 3rd grade reading ability and some instruction in health or science at Grades 3 or 4.

CONTENT AND STRUCTURE: The program teaches the functions of the heart, blood, arteries, capillaries, veins and lungs. The student has a choice of three instructional modes: tutorials with animated sequences, true-false quizzes, and car race games using true-false questions and a time limit. Tutorial sequences are short and provide opportunities for the user to review the animations which are used to illustrate specific concepts. Tutorials include quizzes on previous lessons.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program could be used to review science or health related topics, or for free time enrichment. It may also be used effectively as a resource center activity where students rotate through stations, or it could be the focus of a class exercise with teams competing for points.

MAJOR STRENGTHS: Computer responses are "friendly." Correct answer is given if student gives an incorrect answer. The program is designed for easy entry and exit. The student can bypass previously studied material. There is plenty of opportunity for review. User controls rate of learning. Content is segmented into small units.

MAJOR WEAKNESSES: Use of blue color to represent lungs and cells that have received oxygen deviates from the usual color scheme. The option for students to play a game without going first to an instruction mode is presented too early. Students tend to go directly to the game option, later finding they cannot be successful if they skipped the instruction section.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Math Sequences

PRODUCER: Milliken Publishing Company
1100 Research Blvd.
St. Louis, MO 63132

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981

VERSION: Apple II, Revised (TRS-80 and PET available)

COST: $450.00

ABILITY LEVEL: Grades 1-8
SUBJECT: Math: all elementary topics
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, remedial, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice
DOCUMENTATION AVAILABLE: Suggested grade/ability level, sample program output, program operating instructions, teacher's information, resource/reference information, relationship to standard textbooks, ditto masters for student record keeping

INSTRUCTIONAL OBJECTIVES: To improve students' skills in standard elementary math

INSTRUCTIONAL PREREQUISITES: Package assumes math concepts have been taught. Student begins program at existing skill level.

CONTENT AND STRUCTURE: The package consists of 12 diskettes in a 3-ring binder, a teacher's guide, duplicating masters for student record forms, and an instruction card. An optional automated instructional management system is included. The system provides drill and practice in standard elementary math topics including number readiness, basic operations, laws of arithmetic, fractions, decimals, percent, equations, and measurement formulas.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The package is designed to augment math instruction in an elementary classroom, lab or resource room. It may be used effectively with individuals or small groups. In Grades 1-6 the package is appropriate for remediation, enrichment or on-level instruction; in Grades 7-8 it may be used for on-level or remediation; at Grade 9, for remediation only. Students may use the package independently with minimal training.

MAJOR STRENGTHS: The system is easy for students and teachers to use. Formatting and presentation of instructional material are appropriate for skill levels taught. Student progress is governed by mastery and automatically adjusted. Inclusion of an optional automated instructional management system is an asset for teachers.

MAJOR WEAKNESSES: Students may have difficulty starting a session because habitual use of return key between response to name, class, and level, results in return to the beginning of the program. Management system lacks instruction and examples for easy classroom implementation.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
•					Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
					User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Function Grapher

PRODUCER: Math Software
1233 Blackthorne Place
Deerfield, IL 60013

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981; Revised 2/1/82

VERSION: © 1980

COST: Not sold individually; sold in packages of 5 to 10 programs ranging from $100 to $250

ABILITY LEVEL: Grades 8-14
SUBJECT: Mathematics: graphs, most functions, and their inverses
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II or II Plus, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, problem solving, demonstration
DOCUMENTATION AVAILABLE: Suggested grade level, program operating instructions, description

INSTRUCTIONAL OBJECTIVES: To be able to draw the graph of any function under discussion including polynomial, trigonometric, logarithmic and exponential; to demonstrate the graphing of functions which have discontinuities; to provide an alternative to chalk and blackboard or overhead projector drawing of graphs; to provide reinforcement of ordered pairs and their relationships to graphs; and to allow for more than one function to be graphed on the same set of axes in order to explore intrinsic relationships between the graphs.

INSTRUCTIONAL PREREQUISITES: The program assumes that students understand the definition of a function in formula, ordered pair and graphical forms. Students should also be knowledgeable about two-dimensional graphing.

CONTENT AND STRUCTURE: The opening menu offers students the choice of circular (trig) functions, absolute value functions, greatest integer functions, polynomial functions, or student-supplied functions. Once inside the circular function category, students may select sine, cosine, tangent, cotangent, secant, cosecant, or choose to supply their own circular function. If a student selects the polynomial function category he or she is offered the choice of linear, quadratic, cubic, or quartic function or the opportunity to supply a special function. Regardless of the category, once a specific function has been selected students supply each coefficient. To enable an investigation of the role of the coefficients, students may also elect to have the computer graph a second function on the same set of axes.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used effectively in a classroom setting to demonstrate the graphing of most functions and their inverses.

MAJOR STRENGTHS: The program is very effective in stimulating student creativity.

MAJOR WEAKNESSES: None cited.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Mathematics Drill and Practice

PRODUCER: COMPAK, Inc.
P.O. Box 14852
Austin, TX 78761

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981

VERSION: Apple II

COST: Packaged: $50/concept, all grades; $65/grade, all concepts; $495 all.

ABILITY LEVEL: Grades 1-8
SUBJECT: Math: addition, subtraction, multiplication, division, fractions, decimals, measurement geometry, percents, elementary algebra
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 48K Apple II, one disk drive, monitor, (printer helpful for hard copy of student progress records)
REQUIRED SOFTWARE: DOS 3.2
INSTRUCTIONAL PURPOSE: Standard instruction, remedial, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, learning management
DOCUMENTATION AVAILABLE: Suggested grade/ability level, instructional objectives, program operating instructions, teacher's guide

INSTRUCTIONAL OBJECTIVES: Using a variety of teaching techniques, augment math instruction and improve student achievement; provide individual student math skills assessment and meet individual learning needs.

INSTRUCTIONAL PREREQUISITES: The program is not designed for totally independent study; students need access to supervision, instruction, and feedback. Students must have a general understanding of microcomputer operations and be able to read above the primary level.

CONTENT AND STRUCTURE: The package contains 14 diskettes covering mathematics concepts taught in Grades 1-8. The type of instruction varies from drill and practice to introduction and development of math ideas. Package contents according to grade levels include: Grades 1-8: addition, subtraction, multiplication, division, common fractions, measurement, geometry, elementary algebra; Grades 4-8: decimal fractions; Grades 6-8: percents.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The package is appropriate for use in a learning resource center where students may be scheduled for drill and practice in a specific skill area.

MAJOR STRENGTHS: The package covers basic mathematics concepts and includes a management system that is easy for teachers to use.

MAJOR WEAKNESSES: Each skill area does not contain enough problems to be considered an adequate drill and practice and thus precludes students from attaining mastery in a specific math concept. Sample problems are not provided for students advancing to higher skill levels. Word problems are not included in any of the skill areas. The package does not provide an adequate pre-test assessment of skill deficiencies; as written, the program must be entered by trial and error. At the lower levels of computation drill in addition, subtraction and multiplication, the configuration of the problems does not show regrouping or renaming; students are unable to graphically see the necessary sequence of steps to complete a problem.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
		•			Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
				•	Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
			•		User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package only if certain changes were made (Note Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Library Skills: What's There and How to Find It

PRODUCER: Micro Power and Light Company
Keystone Park, Suite 1108
13773 N. Central Expressway
Dallas, TX 75243

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981

VERSION: Apple II

COST: $24.95

ABILITY LEVEL: Grades 4+
SUBJECT: Library Skills: identifying and locating fiction, non-fiction, biography; using Dewey numbers, card catalog, reference books
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II, one disk drive, color monitor
REQUIRED SOFTWARE: Applesoft Basic
INSTRUCTIONAL PURPOSE: Standard Instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial
DOCUMENTATION AVAILABLE: Suggested grade/ability level, instructional objectives, program operating instructions, post-test

INSTRUCTIONAL OBJECTIVES: At the completion of the program, students will be able to: identify and locate fiction, non-fiction and biographies; use the Dewey Decimal System to locate non-fiction books; use the card catalog to locate books; and know how to locate and use reference books.

INSTRUCTIONAL PREREQUISITES: To use the program successfully, students will need to: know the computer keyboard and the Yes and No commands, be able to read at fifth grade level, be able to learn from a minimal amount of information and practical exercises, and have had prior exposure to a library.

CONTENT AND STRUCTURE: The program is organized into three sections. Part I is a series of text displays telling the student what the computer will do and how and when to respond. This introductory section also defines a library in terms of the kinds of materials most commonly found in modern collections. Part II allows the student to choose among four skills: identifying fiction, non-fiction, and biography; learning how books are arranged; using the Dewey Decimal System and the card catalog to locate books; and using reference materials. Each skill section begins with an objective, a definition and example(s). This is followed by a short series of drill and practice exercises. Students may set their own pace and ask for help from a "First Aid Station." Part III is a brief final drill on all of the skills.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used as a supplementary exercise in a school library skills program, or as a means of assessing a student's skill level prior to instruction.

MAJOR STRENGTHS: The program is cheerful, student paced and uses color graphics appropriately. The operating instructions are well stated and available when needed.

MAJOR WEAKNESSES: The program has spelling and factual errors and provides only minimal tutorial assistance to students. The instructional quality of the program is shallow and incomplete and allows students to go through it giving wrong answers and receive a passing grade. Practice exercises are too short, definitions vague and/or misleading, the reteaching is repetition of past presentations, and documentation is nearly nonexistent. Students are allowed to choose among the skills at random; however, the tutorials and exercises are designed sequentially. The vocabulary level is too difficult for fourth graders.

EVALUATION SUMMARY

SA	A	D	SD	NA	
		•			Content is accurate.
		•			Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
			•		Package achieves defined purpose.
		•			Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
				•	Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
			•		Instruction integrates with prior learning.
		•			Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
		•			Information displays are effective.
			•		Users can operate easily and independently.
			•		Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use this package (Note Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Binomial Multiplication

PRODUCER: Math Software
1233 Blackthorne Place
Deerfield, IL 60013

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981; Revised 2/1/82

VERSION: © 1980

COST: Not sold individually; sold in packages of 5 to 10 programs ranging from $100 to $250

ABILITY LEVEL: Grades 8-12
SUBJECT: Mathematics: graphical presentation of binomial multiplication
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II or II Plus, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, demonstration
DOCUMENTATION AVAILABLE: Suggested grade level, program operating instructions, description

INSTRUCTIONAL OBJECTIVES: To demonstrate that the product of two binomials is a valid process; to show that binomial multiplication has a relationship to the areas of rectangular geometric regions; to demonstrate the effect that negative values for A and B have on the geometric area analog; and to demonstrate a unique approach to considering binomial multiplication.

INSTRUCTIONAL PREREQUISITES: The program assumes that students are familiar with multiplying monomials, know the distributive property, and understand the concept of area as it relates to the rectangle. Students should also have had algebraic practice in binomial multiplication.

CONTENT AND STRUCTURE: This program demonstrates that $(X+A)(X+B)=X^2+AX+BX+AB$ is a true equation. Students may input any value of "A" or "B" from -5 to 5 inclusive. Using graphics, the equivalence of the right and left hand sides of the equation is shown through the use of areas.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used effectively in a classroom setting to demonstrate a unique approach to understanding binomial multiplication.

MAJOR STRENGTHS: The program provides a good demonstration of binomial multiplication.

MAJOR WEAKNESSES: Information displays disappear before students have time to digest them.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
			•		Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Limits of Sequences

PRODUCER: Math Software
1233 Blackthorne Place
Deerfield, IL 60013

LOCAL DISTRIBUTORS: Contact producer for list

EVALUATION COMPLETED: Fall 1981; Revised 2/1/82

VERSION: © 1980

COST: Not sold individually; sold in packages of 5 to 10 programs ranging from $100 to $250

ABILITY LEVEL: Grades 11-14
SUBJECT: Mathematics: graphical representation of limits of sequences
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: 32K Apple II or II plus, one disk drive, monitor
REQUIRED SOFTWARE: DOS 3.2 or 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Simulation, demonstration
DOCUMENTATION AVAILABLE: Suggested grade level, program operating instructions, description

INSTRUCTIONAL OBJECTIVES: To demonstrate graphically a sequence; to demonstrate the definition Lim a(n) = L; n $\rightarrow \infty$ to demonstrate the neighborhood definition of limits in general and sequences in particular; and to demonstrate the concept of convergence of a sequence.

INSTRUCTIONAL PREREQUISITES: The program assumes the students know the definition of a sequence from a functional point of view, theoretically understand the limit concept as applied to sequences, are knowledgeable about the various sequences provided in the menu and the notation used within these sequences, and understand two-dimensional graphing.

CONTENT AND STRUCTURE: The program graphically displays approximately 55 terms of a sequence. First, the epsilon neighborhood of the limit is drawn with the value of epsilon. The threshold value, M, is then computed and printed. This provides a graphic interpretation of the definition of limit of sequences which shows that the nth sequence terms are within the epsilon neighborhood of the limit when n M. The five menu selections enable the user to choose a suggested sequence or to specify his or her own sequence choice.

ESTIMATED STUDENT TIME REQUIRED: Not available

POTENTIAL USES: The program may be used effectively in a classroom setting as an introduction to a unit on limits. It can provide a meaningful tool to expand and enhance student comprehension of sequences and their limits.

MAJOR STRENGTHS: None cited.

MAJOR WEAKNESSES: The formula disappears from the final graph.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
				•	Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Karel the Robot

PRODUCER: Cybertronics International, Inc.
Software Publishing Division
999 Mount Kemble Ave.
Morristown, NJ 07960

EVALUATION COMPLETED: October 1982, by the staff members of Corvallis Public Schools, Oregon, and Oregon State University.

COST: $242.00 for the complete package (six disks plus documentation)

ABILITY LEVEL: Ninth grade and above
SUBJECT: Computer programming
TOPIC: Introduction to programming and PASCAL
MEDIUM OF TRANSFER: 5 1/4" flexible disk
REQUIRED HARDWARE: Apple II (48K) with 16K additional RAM or language card and at least one disk drive.
REQUIRED SOFTWARE: UCSD PASCAL (Apple O:)
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: simulation and problem solving

DOCUMENTATION AVAILABLE: Supplementary materials include the suggested grade and ability levels, the instructional objectives, sample program output, operating instructions, teacher's information, resource and reference information, student's instructions and follow-up activities.

INSTRUCTIONAL OBJECTIVES: (Stated) To introduce structured programming concepts and to familiarize the student with the abstractions and fundamental control structures of PASCAL in a simulated environment.

INSTRUCTIONAL PREREQUISITES: (Inferred) The package claims to be for complete novices, but, for use in the short period of time indicated, prior experience with computer operations would be needed.

CONTENT AND STRUCTURE: The complete package consists of two disks for 40 column screen (available for 80 column with appropriate extension board), set of two course disks, Karel Primer (tutorial) for one disk or for two disk versions, Karel Users' Manual and Karel the Robot: A Gentle Introduction to the Art of Programming by Richard Pattis. The program provides hand simulation activities allowing the student to solve problems with Karel's world and to create situations in Karel's world. When the student is familiar with this, the instruction is extended to a representational stage using the Karel computer simulator, which introduces the concepts of computer operation, compilation and editing in the UCSD PASCAL system. With the hand simulation, a student demonstrates an understanding of how a computer program and a programming language work, without requiring computer hardware. The computer simulation provides immediate reinforcement concerning syntax and execution which may have been missed in the hand simulation.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
•					Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Karel the Robot, continued

ESTIMATED STUDENT TIME REQUIRED: For students at the college level, the package suggests eight lectures given over a period of two and a half weeks. This same time would probably be adequate for advanced high school students. With average high school students, it would be wise to increase this to four weeks to allow time for concept assimilation.

POTENTIAL USES: At the beginning of an introductory programming course, prior to the study of a computer language, specifically PASCAL.

MAJOR STRENGTHS: The complete package is well developed, providing an introductory curriculum which is pedagogically sound, consistent with the way students learn, motivational and easy to use. It contains hand simulation programs which begin with a concrete, holistic perspective of computer programming and the PASCAL language. The Karel Simulator provides a representational form for the concrete model of concepts developed in hand simulation. It provides a means of developing difficult concepts in a relatively uncomplicated environment and provides a foundation for learning the PASCAL language without the confusion of more abstract concepts, such as variables, variable manipulation and complex arithmetic. The package teaches programming constructs consistent with structured programming techniques.

MAJOR WEAKNESSES: In the World Builder portion of the simulation ordered pairs were described as vertical, horizontal rather than the conventional horizontal, vertical. The manual can be misleading when entering the Filer System for the first time: the files suggested for removal may have been removed by a prior user. Cost may be a problem when considering the requirement of one software system and an additional 16K RAM for each computer. High resolution graphics would be more effective.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Volcanoes

VERSION: 1.4E

PRODUCER: Earthware Computer Services
P.O. Box 30039
Eugene, OR 07403

EVALUATION COMPLETED: June 1982 by staff of NWREL and constituents of the Alaska Department of Education

COST: $49.50

ABILITY LEVEL: Secondary and College
SUBJECT: Earth Sciences/Geology: Volcanoes
MEDIUM OF TRANSFER: 5 1/4' flexible disk
REQUIRED HARDWARE: Apple II or Apple II Plus, one disk drive, a color monitor or TV with RF modulator (a B & W will work).
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction and enrichment
INSTRUCTIONAL TECHNIQUES: Game/simulation

DOCUMENTATION AVAILABLE: In computer program: program operating instructions, student's instructions. In supplementary materials: instructional objectives, sample program output, program operating instructions, pretest, posttest, teacher's information, resource/reference information, student's instructions, student worksheets, follow-up activities, glossary of terms.

INSTRUCTIONAL OBJECTIVES: The program teaches volcanic terminology, the types of volcanoes, methods and results of remote sensing surveys, interpretation of bar graphs, keeping careful records and interpretation of scientific observations.

INSTRUCTIONAL PREREQUISITES: Knowledge of the terms included in the documentation; knowledge of the various methods of surveying a volcanic region. This information is included in the documentation.

CONTENT AND STRUCTURE: Package consists of two diskettes, two Blue Books (user reference manuals), two sets of reproducible maps and one teacher's manual. Two to three players are assigned areas on a map by the computer. Each player is assigned a research fund and skill level. Players must conduct simulated scientific surveys, such as infrared scans, of their areas and predict volcanic eruptions. Players keep records, dispense a research budget, plan research strategies and evaluate research results.

ESTIMATED STUDENT TIME REQUIRED: Two to four hours

POTENTIAL USES: Volcanoes could be used to supplement a high school geology or earth science class which covers volcanism. The package could also be used with advanced upper elementary and junior high school students. The teacher would need to provide students with adequate background information and time in order to successfully complete the simulation game.

MAJOR STRENGTHS: The background information and instructor's manual are very well written. A pretest, posttest and helpful bibliography are included. Volcanoes allows the student to simulate the role of a volcanologist and provides insight into the role of a research scientist and the science of volcanology.

MAJOR WEAKNESSES: Students had some difficulty learning what to do to successfully predict an eruption. It would be helpful to have the computer print a list of current conditions, i.e., gases, recent seismic activity, location of hot spots, etc. This would give student more of an opportunity to get a "feel" for expected eruptions.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
●					Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
	●				Student creativity is effectively stimulated.
		●			Feedback is effectively employed.

SA	A	D	SD	NA	
●					Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Addition and Subtraction 1 & 2

PRODUCER: Scott, Foresman & Co.
1900 E. Lake Ave.
Glenview, IL 60025

EVALUATION COMPLETED: May 1982 by the Institute for Educational Research, Glen Ellen, Illinois (This evaluation was partly based on observation of student use of the package.)

COST: $44.95 per package (varies by local distributor)

ABILITY LEVEL: K-3 (Package 1 is for K-2, package 2 for 1-3)
SUBJECT: Mathematics—addition and subtraction of whole numbers. Package 1 covers 1-9, package 2 covers 1-18.
MEDIUM OF TRANSFER: ROM cartridge
REQUIRED HARDWARE: TI 99/4 or 99/4A. A speech synthesizer is optional.
REQUIRED SOFTWARE: Standard TI Language and Operating System
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game

DOCUMENTATION AVAILABLE: The computer program includes the program operating instructions and student instructions. The supplementary materials include suggested grade and ability levels, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, post-tests, teacher's information, student's instructions, student worksheets and followup activities.

INSTRUCTIONAL OBJECTIVES: (Stated) Addition and Subtraction 1: to recognize numbers 0 through 9, to count objects, to understand the meaning of addition and subtraction and to practice basic addition and subtraction facts using the numbers 1 through 9. Addition and Subtraction 2: to recognize numbers 0 to 18, to add numbers with sums ten to eighteen, to add three addends and to subtract numbers with minuends of 10 to 18.

INSTRUCTIONAL PREREQUISITES: Addition and Subtraction 1 parallels grade 1 arithmetic, while Addition and Subtraction 2 parallels grade 2 arithmetic.

CONTENT AND STRUCTURE: Each package consists of nine activities. Included in Addition and Subtraction 1 are counting 0-9, addition two ways, subtraction two ways and addition and subtraction tables. These activities can be randomly accessed or sequentially run as controlled by the program. The activities in Addition and Subtraction 2 include counting 1-10, 10-18, addition facts, adding two ways, subtraction facts, subtracting two ways and review and post-test. These packages are components of an integrated series; they may not be listed and/or altered.

POTENTIAL USES: Individualized drill and practice, review, tutorial.

MAJOR STRENGTHS: High student interest, non-threatening, nicely organized format, minimal student anxiety with positive or negative reinforcement.

MAJOR WEAKNESSES: There is no way to control the length of lessons, there is no control of the difficulty of problems.

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
●					Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
●					Content presentation is clear and logical.
●					Difficulty level is appropriate to audience.
●					Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
			●		Student creativity is effectively stimulated.
		●			Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
		●			Instruction integrates with prior learning.
		●			Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Alphabet Keyboard

PRODUCER: Random House, Inc.
School Division
1970 Brandywine Rd.
Atlanta, Georgia 30341

EVALUATION COMPLETED: June 1982 by staff of the Portland Public Schools, Oregon

COST: Cassette: $24 Disk: $34.50

ABILITY LEVEL: K-1
SUBJECT: Reading: location of letters on keyboard, order of letters in alphabet
MEDIUM OF TRANSFER: Cassette or 5 1/4" flexible disk
REQUIRED HARDWARE: Radio Shack TRS-80 Model I, 16K cassette; Model III 32K with disk; Apple II 32K with disk.
REQUIRED SOFTWARE: Model III, TRS-DOS; Apple II, DOS 3.3.
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer program includes operating instructions and student instructions. Supplementary materials include the suggested grade and ability levels, instructional objectives, program operating instructions, sample program output, teacher's information and student instructions.

INSTRUCTIONAL OBJECTIVES: (Stated) The program teaches kindergartners and first graders the location of letters on the computer keyboard. It also teaches the child to type letters in alphabetical order. No attempt is made to teach finger positions or other typing skills.

INSTRUCTIONAL PREREQUISITES: (Inferred) The user needs to know the correct order of the alphabet in order to succeed. Students would need a teacher's help to read instructions.

CONTENT AND STRUCTURE: This package consists of a diskette and a notebook explaining the program to the teacher. The diskette contains three exercises: one on the location of capital letters on the keyboard, one on the location of lower case letters and one one the order of letters in the alphabet. This package is one component of an integrated series in reading being developed by Random House.

ESTIMATED STUDENT TIME REQUIRED: Twenty to thirty minutes; repeated usage would probably be necessary to learn skills.

POTENTIAL USES: This package would be appropriate for students who want to learn the computer keyboard and who can read instructions.

MAJOR STRENGTHS: The program is clearly presented and it helps students use the keyboard in their first experience with a computer.

MAJOR WEAKNESSES: The program is designed for kindergarten and first graders, but children this age usually cannot read the instructions on the screen. They would need to know the alphabet to do so.

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
	●				Content has educational value.
●					Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
		●			Difficulty level is appropriate to audience.
●					Graphics/sound/color are used appropriately.
●					Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
		●			Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
		●			User support materials are effective.
	●				Information displays are effective.
		●			Users can operate easily and independently.
	●				Teachers can employ package easily
●					Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this program only if certain changes were made.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Alien Addition

VERSION: L1100

PRODUCER: Developmental Learning Materials
P.O. Box 4000
Allen, Texas 75002

EVALUATION COMPLETED: April 1982 by SMERC/CUE, California

COST: $39.00

ABILITY LEVEL: Kindergarten and above as needs indicate
SUBJECT: Math: addition facts 0-9
MEDIUM OF TRANSFER: 5 1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II or Apple II Plus, single disk drive, color monitor or television preferable (black and white will work), game paddles optional.
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game, problem solving

DOCUMENTATION AVAILABLE: The computer program supplies teacher's information. Supplementary materials include the suggested grade and ability level, instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information, resource and reference information, student worksheets and flashcards, followup activities and extensive material for use in monitoring student progress.

INSTRUCTIONAL OBJECTIVES: (Stated) The overall purpose is to assist students in learning arithmetic facts of addition through motivational practice. This practice should provide students with consistent recall of these facts in more complex math operations and in everyday situations. It is designed to work with students of all ages requiring math practice using numbers 0-9.

INSTRUCTIONAL PREREQUISITES: (Stated) Depending on the student's experience with the microcomputer, the instructor may need to spend time explaining the object of the game and the way in which it operates.

CONTENT AND STRUCTURE: "Alien Addition" provides practice in addition of numbers 0-9 using an arcade game format. Invading spaceships with addition facts move from the top of the screen toward a laser cannon at the bottom. A correct answer "equalizes" the spaceship; otherwise the spaceship blows up the cannon in an atomic cloud. The game may be played with paddles or on the keyboard. The user can manipulate the speed of the game, the range of problems covered in the game and the number of minutes each game runs. The package also contains practice worksheets and flashcards which match the format of the program graphics, as well as progress charts for students, an evaluation guide for the teacher and suggestions for integrating the program. "Alien Addition" is a component of an integrated program series.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
●					Package achieves defined purpose.
				●	Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
●					Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
●					User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
●					Teachers can employ package easily.
●					Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Alien Addition, continued

ESTIMATED STUDENT TIME REQUIRED: Five to ten minutes per day for a period of several weeks, depending on the rate of progress and maintenance of interest.

POTENTIAL USES: This program can be used for instruction or as a supplement to the curriculum. It can be used for drill and practice with basic facts. It may be used individually, with class competition as an option. Though mastery of these addition facts is expected at grades 1-3, the program would be valuable for remediation at higher levels. To help young students get used to the dexterity skills required, small teams may be set up with one student calling out the answer, while another does the typing.

MAJOR STRENGTHS: This is a challenging program for young students and one which maintains a high interest level. The options which are provided allow the program to be tailored to individual needs. The combination of graphics, sound and color are of good quality and therefore interesting to students. The program motivates and demands memorization and quick reactions in a new way which may reach students not previously motivated. The program operates reliably and does not require constant teacher intervention.

MAJOR WEAKNESSES: Some teachers might find the sound effects distracting to the rest of the class. An option might be provided to disable the sound. Evaluators also noted that some persons might find the program depends excessively on violence, though this was not a problem for the present evaluators. One person suggested that it would be useful to be able to store chosen options on the disk, rather that having to enter them with each new use. Finally, the final score is shown too quickly, with no time to view it. Either some warning must be given that the game is over, or there must be a special key to press in order to continue with a new game.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Wizard

VERSION: TRS-80 Model I/III

PRODUCER: Richard Taylor
Programs Unlimited
P.O. Box 265
Jericho, N.Y. 11753

EVALUATION COMPLETED: June 1982 by the staff of the West Lafayette School Corporation, Indiana

COST: $19.95 (disk)

ABILITY LEVEL: Grades 4-12
SUBJECT: User Defined
MEDIUM OF TRANSFER: 5" floppy disk
REQUIRED HARDWARE: For disk: TRS-80 Model I/III, 32K RAM, disk drive
REQUIRED SOFTWARE: TRS-80 Disk Basic
INSTRUCTIONAL TECHNIQUES: Drill, game playing and information recognition
DOCUMENTATION AVAILABLE: Two pages of program operating instructions and teacher's information

INSTRUCTIONAL OBJECTIVES: (inferred) To improve the students'.ability to recognize factual information.

INSTRUCTIONAL PREREQUISITES: (inferred) The user would have to be able to read and identify letters or numbers.

CONTENT AND STRUCTURE: The package has a disk and a two page manual that explains how to play Wizard and describes the procedure for constructing questions for the data base. The Wizard will challenge up to four players with timed responses to each question. Players can steal questions from opponents or force them into answering. This program provides both visual and sound rewards. Several data bases (presidents, Startrek, T.V. trivia, etc.) are included on the disk.

POTENTIAL USES: Wizard can be used in any subject to construct and administer multiple choice questions. The program can be used for drill, review or to introduce new factual information as a pretest for up to four students at a time.

MAJOR STRENGTHS: Wizard provides the teacher, who has little experience in computer instruction and few computers, a means of using a self-loading data base. Questions can be changed often with the question builder program. Many students enjoy the gaming abilities of the program.

MAJOR WEAKNESSES: Questions must be direct and fairly short. Some children have difficulty understanding the method of awarding points. Only short questions and answers can be entered into the data base.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
		●			Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
●					Graphics/sound/color are used appropriately.
●					Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
		●			Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
		●			User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
●					Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Math Strategy: Linear Search Games

PRODUCER: Creative Publications, Inc.
P.O. Box 10328
Palo Alto, CA 94303

EVALUATION COMPLETED: June 1982 by staff of NWREL and constituent districts of Linn-Benton ESD, Oregon

COST: $22.50

ABILITY LEVEL: Middle school
SUBJECT: Mathematics
TOPIC: Problem solving
MEDIUM OF TRANSFER: 5 1/4" flexible disk, tape cassettes
REQUIRED HARDWARE: 16K Apple with disk drive and monitor, PET, or TRS-80
REQUIRED SOFTWARE: DOS 3.2.1 or DOS 3.3, TRS-DOS
INSTRUCTIONAL PURPOSE: Remediation or enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game, problem solving

DOCUMENTATION AVAILABLE: In computer program: suggested grade level, program operating instructions, student's instructions. In supplementary materials: instructional objectives, sample program output, program listings, operating instructions, resource/reference information, teachers' information, student's instructions, student's worksheets, answer keys, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (Number Guess) to develop both the concept and the use of a logical strategy in a problem solving situation involving the ordering of numbers; (Letter) to transfer this strategy to a related problem involving the alphabet; (Trap) to develop a strategy in a new problem solving situation by revising and modifying a previous successful strategy; (Letter Trap) to transfer the strategy for TRAP to a related problem involving the alphabet; (Divide and Conquer) to analyze a more complex problem and develop a strategy by combining elements of previously learned strategies.

INSTRUCTIONAL PREREQUISITES: None given

CONTENT AND STRUCTURE: The diskette or tape includes five related computer games—Number Guess, Letter, Trap, Letter Trap and Divide and Conquer—which allow students to discover the advantages of developing a logical plan for game play, rather than depending on erratic guessing and luck. Mathematical concepts are reinforced during the play of the game and discovery of the strategy. The games have been sequenced so that the students first develop a strategy, then test it in a slightly different context, and finally use it as a basis for discovering a further strategy.

ESTIMATED STUDENT TIME REQUIRED: 45 minutes to 1 hour

POTENTIAL USES: The package is useful for individual enrichment or for remedial teaching for younger (lower elementary) students who have trouble with the alphabet or ordering of numbers from 1-100.

MAJOR STRENGTHS: Problem solving strategy is involved. The programs all require choosing or guessing a missing number or letter from a sequence. The games are presented in a straightforward manner.

MAJOR WEAKNESSES: The graphics are not motivating. Directions for entering multiple inputs are not clear. Divide and Conquer gave an OUT OF DATA statement twice, and was difficult to understand. (MicroSIFT note: program listings are provided.) Package is too difficult for primary grades and not motivational for high school students; should be used with middle grades only.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
●					Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
		●			Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
		●			Instruction integrates with prior learning.
		●			Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
		●			Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made (note Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Instructional Computing in Algebra II

VERSION: Apple II (1981)

PRODUCER: Pinellas County School System
Clearwater, Florida 33518

Distributed by:

Margaret Hackworth
1960 E. Druid Road
Clearwater, Florida 33516

EVALUATION COMPLETED: May 1982 by the staff and constituents of the Alaska Department of Education, Local School Districts in Alaska. Evaluation of this package was based partly on observation of student use.

COST: $5.00 + 2 disks (Radio Shack or Apple Versions)

ABILITY LEVEL: Grades 9-12
SUBJECT: Mathematics: algebra II
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II or Apple II plus with one disk drive and a color monitor. (Black and White will also work.) (also available for TRS 80 Model II 32K)
REQUIRED SOFTWARE: DOS 3.3, Applesoft Basic
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, information retrieval, game, simulation, problem solving, teacher demonstration.

DOCUMENTATION AVAILABLE: The following documentation is available in the computer program: program operating instructions, student's instructions and followup activities. Supplementary materials contain additional documentation; suggested grade/ability levels, instructional objectives, program operating instructions, teacher's information, resource/reference information, student instructions. Field test data are available from the producer on request.

INSTRUCTIONAL OBJECTIVES (Stated): These demonstration programs are intended to be used as aids to (not substitutes for) classroom discussion to enhance the instruction of Algebra II. In addition, each individual program in the collection has a stated purpose.

INSTRUCTIONAL PREREQUISITES (Inferred): Experience with Algebra I, and all necessary instruction leading up to each topic in this package.

CONTENT AND STRUCTURE: The package consists of two diskettes and an accompanying manual. The diskettes contain fourteen independent programs which cover the following topics in Algebra II: the real number system, polynomials and factoring, linear equations and inequalities, sequences and series, binomial expansion, quadratic relations and systems, logarithms, and recreational mathematics. Within

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
		•			Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
			•		Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
			•		Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
				•	Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
		•			User support materials are effective.
			•		Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made (See Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Instructional Computing in Algebra II, continued

each topic, one, two or three programs illustrate and amplify particular concepts. Listing and alteration of the programs are allowed.

ESTIMATED STUDENT TIME REQUIRED:
Varies: See "Potential Uses" below.

POTENTIAL USES: The entire collection is intended to be used by a teacher in conjunction with large-group class presentations. A monitor large enough for the entire class to see is necessary for optimum use of the package. While the package as a whole is not designed for individual use, some programs could be run by students as drill and practice or tutorials, as could some of the games. The package does not (and does not attempt to) provide sufficient information or feedback to justify its use as a tutorial package on an individual basis.

MAJOR STRENGTHS: Topics represented in the package are appropriate and important. Some of the programs offer interesting approaches to drill and practice exercises; "Distance-Rate-Time" was cited as an example. By speeding up explanations and illustrations which would otherwise have to be shown by hand, many of the programs offer a real help to the teacher. Finally, it was noted that these programs provide variety to the instruction of Algebra II.

MAJOR WEAKNESSES: The directions contain an error with regard to use of the "return" key. Contrary to what is stated, the key should not be used. The display of directions in large print was felt to be far too slow — and thus inappropriate — for the target audience. Some of the programs appear to be trivial applications of computer technology (real number tree and synthetic division were cited as examples). Finally, some of the programs fail to reach their objective due to hardware limitations ("PI approximator" and "Irrationals" were mentioned as examples.)

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Touch Typing

VERSION: TRS-80 Model I/III

PRODUCER: Cove View Press: Software
P.O. Box 810
Arcata, CA 95521

EVALUATION COMPLETED: June 1982 by the staff of West Lafayette School Corporation, Indiana. This evaluation is based partly on observation of student use of this package.

COST: $19.95 for cassette, $24.95 for disk

ABILITY LEVEL: Grades 5-12
SUBJECT: Typing instruction and drill
MEDIUM OF TRANSFER: 5 1/4" flexible disk, cassette tape
REQUIRED HARDWARE: For cassette: TRS-80, Model I or III and tape recorder. For disk: TRS-80, Model I or III and disk drive
REQUIRED SOFTWARE: For disk, TRS-80 disk basic
INSTRUCTIONAL PURPOSE: Standard instruction, remediation, enrichment
INSTRUCTIONAL TECHNIQUE: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: One page of student's instructions and information

INSTRUCTIONAL OBJECTIVES: (Inferred) For the student with no typing experience: (1) know the keyboard positions, (2) be able to type letters, characters and numbers using the proper fingers for each and (3) be able to type without looking at the keyboard. For the student with some typing experience: (1) increase speed as a result of extra practice and (2) increase accuracy as a result of practice.

INSTRUCTIONAL PREREQUISITES: (Inferred) Ability to read, interpret and follow instructions, manual dexterity and ability to operate the computer.

CONTENT AND STRUCTURE: Lessons 1-18 develop proper touch and fingering of the keyboard by drilling with single letters, words and sentences. Lesson 18 is a post-graduate exercise to race the computer on single letter practice to build speed and accuracy.

POTENTIAL USES: Standard instruction: (1) assign individual students time on the computer while she/he is learning the keyboard and (2) independent study students could have access to computer while learning the keyboard. Remediation: students having difficulty keeping up in regular typing class could be assigned to the computer for additional practice. Enrichment and assessment: (1) computer would be accessible to students who complete assignments early and (2) computer would be accessible to students for enrichment practice and assessment at times other than assigned class periods.

MAJOR STRENGTHS: Program contains sufficient information and prompting to permit students to progress through the lessons with little or no assistance. Lessons are presented in a

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•				Package achieves defined purpose.
		•			Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Touch Typing, continued

logical sequence of home row keys, extention keys and the entire keyboard. Exercises are in logical sequence from single letters to sentences. Lesson 18 allows student to set speed goals and be challenged to reach those goals. Lesson 18 also has an opportunity for speed and accuracy drill with screen displaying the results (total letters typed as well as % of accuracy). Content provides opportunities for remediation, enrichment and competency assessment. Printed lesson oveviews provide quick and easy reference for teachers and students.

MAJOR WEAKNESSES: Limited documentation with no information for operating the computer or instructions of how to use the programs. The directory lists Typing 1-10 but no information on which lessons are in each group (for example, Typing 1 covers Lesson 1 and 2). Access to a particular lesson is difficult and frustrating (you must "break" and run Typing 4 to receive Lesson 7). Sometimes computer reads a correct response as incorrect and hangs up on an exercise (if malfunction in Lesson 17 doesn't clear, you must "break" and run Typing 9 to get Lesson 16 and run all of that to reach where you had trouble in Lesson 17). In Lesson 18 (the post-graduate exercise) the exercises revert to single letter; sentences would provide a more acceptable measure of students' ability to type on the control level of speed and accuracy. The only way to get out of the programs is to use the "break" key.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Numeric Data Entry Practice

VERSION: 1981

PRODUCER: Radio Shack
Education Division
400 Atrium
One Tandy Center
Fort Worth, Texas 76102

EVALUATION COMPLETED: May, 1982, by the staff and constituents of San Mateo Educational Resource Center, California

COST: $39.95

ABILITY LEVEL: 9-12, adult
SUBJECT: Business education
MEDIUM OF TRANSFER: 5 1/4" flexible d
REQUIRED HARDWARE: 32K Radio Shack TRS-80 Model I/III
REQUIRED SOFTWARE: Level II basic
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, learning management

DOCUMENTATION AVAILABLE: The computer program includes the program operating instructions, post-tests, teacher's information, student instruction and progress charts. The supplementary materials contain additional documentation, including sample program output, program operating instructions, teacher's information and progress charts.

INSTRUCTIONAL OBJECTIVES (Inferred): To develop speed and accuracy in keyboard numeric data entry.

INSTRUCTIONAL PREREQUISITES: None specified

CONTENT AND STRUCTURE: This package consists of a number of drills designed to teach numeric data entry skills using the 'touch' system with a 10 key pad. There are 25 lessons in all. At selected intervals, tests are available to measure stroke rate and accuracy. A teacher management program allows teachers to enroll students and monitor progress on the screen or line printer (if one is available). Listing and alteration of the program are not allowed.

ESTIMATED STUDENT TIME REQUIRED: Nine to fourteen hours; the package is arranged for continuous progress so that the student can stop when competence is achieved.

POTENTIAL USES: This program could be used in business education classes at the high school and college level to train students to develop speed and accuracy using the numeric keyboard for data entry. The program is designed for use by individuals. Students might be cycled through the program on a rotating basis, and it is possible for three different students to complete one lesson each in one fifty minute class session.

MAJOR STRENGTHS: (1) The program requires minimum teacher supervision. (2) The student management system is good; passwords for students can be changed; student reports can be viewed on the screen or printed on a line printer.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
●					Content has educational value.
●					Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
●					Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
●					Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
			●		Student creativity is effectively stimulated.
●					Feedback is effectively employed.

SA	A	D	SD	NA	
●					Learner controls rate and sequence.
				●	Instruction integrates with prior learning.
				●	Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
●					Information displays are effective.
●					Users can operate easily and independently.
●					Teachers can employ package easily.
●					Computer capabilities are used appropriately.
●					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Numeric Data Entry Practice, continued

(3) Teacher support materials are very helpful. (4) The policy on backup copies is flexible, allowing one purchase to be used on many machines.

MAJOR WEAKNESSES: (1) Students must complete 50 exercises in order to complete each lesson. The number of lessons should be under teacher control as part of management system to allow maximum flexibility. For instance, a student might already know the 10 key pad and only need a refresher or speed development. Some students will not need all 50 lessons. (2) The management system delete function does not allow the deletion of individual students—either all or none may be deleted. (3) A tutorial graphic showing fingers touching correct keys would enhance the value of the package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Sentence Diagramming

VERSION: 2.0

PRODUCER: Avant-Garde Creations
P. O. Box 30160
Eugene, Oregon 97403

EVALUATION COMPLETED: February 1982 by the staff and constituents of TIES, Minnesota.

COST: $24.95

ABILITY LEVEL: Junior/Senior High
SUBJECT: English: parts of speech, usage, sentence diagramming
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II with one or two disk drives
REQUIRED SOFTWARE: DOS 3.3 (an additional disk must be supplied by the user for student record keeping)
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, simulation

DOCUMENTATION AVAILABLE: Instructions to the student are available in the computer program. Supplementary materials contain sample program output, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Inferred): 1. to provide practice in the identification of the parts of speech in sentences. 2. to provide practice in the identification of word function in sentences. 3. to provide practice in the identification of sentence types. 4. to provide practice in the correct placement of words within a pre-designed sentence diagram.

INSTRUCTIONAL PREREQUISITES: (Inferred): Teachers using the package should be familiar with common computer terminology and file storage on the Apple II. They should also have an extensive knowledge of linguistic terminology. Students using the package should have a working knowledge of the Apple II, familiarity with linguistic terminology, and awareness of the structure and purpose of sentence diagramming.

CONTENT AND STRUCTURE: This package is divided into four parts, the last of which (sentence diagramming) is optional. In the first section the student is given a sentence and asked to identify the part of speech for each word in the sentence. In the second section the student identifies the usage of each word in a new sentence. In the third section the student is asked to classify a new sentence as either declarative, interrogative, imperative or exclamatory. The final section covers sentence diagramming. In this section the student is asked to correctly identify words in a sentence diagram structure. When the word is correctly identified, the word is graphically placed in the correct part of the blank sentence structure. In addition to the four drill and practice programs, there is also a simple management system. The management program performs two basic functions. First, it allows the

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
			•		Content is accurate.
			•		Content has educational value.
	•				Content is free of stereotypes.
			•		Purpose of package is well defined.
			•		Package achieves defined purpose.
			•		Content presentation is clear and logical.
			•		Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
			•		Instruction integrates with prior learning.
			•		Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
			•		Information displays are effective.
			•		Users can operate easily and independently.
					Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
				•	Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend this package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Sentence Diagramming, continued

teacher to preselect the number of sentences and criterion level for all students. Second, it records the scores on each level of difficulty for a group of students. There are three levels of instructional difficulty. The number of records that can be kept on one disk is not specified. The documentation booklet provides some directions about how to operate the system, but it contains very few sample frames and no followup activities.

ESTIMATED STUDENT TIME REQUIRED: 45 minutes per level; two hours and fifteen minutes is a minimum total time for the package.

POTENTIAL USES: This package may have potential use in a college grammar or linguistics class. If the usage portion of the program were not used, the package would probably be appropriate for use in a high school situation. One reviewer indicated he would not use the package for independent study because of the inadequacy of the documentation and the poor quality of the internal directions. The same reviewer warned against any teacher using the package who is not familiar with computer terminology. Evaluators concluded the package might have use as drill and practice in sentence diagramming and identification of parts of speech if the section on "usage" were ignored.

MAJOR STRENGTHS: 1. The teacher can specify criteria for both number correct and number of sentences attempted. 2. The graphic layout for the sentence diagrams is fairly clear. 3. The cost of the package is fairly low.

MAJOR WEAKNESSES: 1. The instructions are confusing and difficult to see. Often they are erased as soon as the student types a response. 2. There is poor use of space on many of the frames. Some are very cluttered, while others are very sparse. Sample questions are not clearly separated from directions. 3. There is a tremendous discrepancy in the levels of difficulty for each of the sections. The "usage" section is exceptionally difficult and contains an excessive amount of complex terminology. 4. Input requirements are often very confusing, especially in the "usage" section. The practice sample contains a word for which there is no possible correct answer. 5. An excessive number of abbreviations are used. Many are obscure (e.g., nom. of addr., lst wd of dep cl, ques.). 6. The directions for operating the management system and initializing the disk are very confusing. 7. Reinforcement is inadequate. 8. Material in the "usage" section confuses word class with word function. The documentation is insufficient, poorly organized and lacks a sufficient number of screen displays.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Wordwatch

VERSION: © 1980

PRODUCER: Instant Software, Inc.
Peterborough, NH 03458

EVALUATION COMPLETED: June 1982 by the staff of the West Lafayette School Corporation, Indiana.

COST: $14.95

ABILITY LEVEL: Upper elementary and junior high
SUBJECT: Language arts
TOPIC: Spelling and vocabulary
MEDIUM OF TRANSFER: Tape cassette
REQUIRED HARDWARE: TRS-80, 16K, Level II, tape recorder
REQUIRED SOFTWARE: None for cassette (written in level II basic). Programs may be transferred to disks.
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game and simulation

DOCUMENTATION AVAILABLE: Program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Inferred) Several programs are presented on the cassette tape. "Word Race" tests the abilities of two players to define words. "Hide n' Spell" is designed to help students test and increase spelling ability. "Spelling Bee" is designed to help students spell words entered by the teacher into the program. "Spelling Tutor" drills students on words typed into the computer by the student or teacher.

INSTRUCTIONAL PREREQUISITES: (Inferred) Students must be able to follow directions. The directions are given in paragraphs written at the fifth grade level and probably require explanation and some computer experience. If the teacher reprograms in their own words and definitions for "Hide n' Spell" or "Spelling Bee," the program can easily be adjusted to the needs of the students.

CONTENT AND STRUCTURE: The following programs are presented on the cassette tape: "Word Race," in which two players choose the best definition for a word, thus advancing a race car to a finish line at the end of the game. "Hide n' Spell" displays four words, with one misspelled. Players type the letter of the misspelled word and spell the word correctly. "Spelling Bee" asks the teacher (or student) to type in up to 40 words and pronounce each word into a cassette recorder. The words are played back and the student spells the words on the computer. The student receives reinforcement from the computer. "Spelling Tutor" allows the student or teacher to type in any number of words correctly. The words are presented scrambled with missing letters and misplaced vowels. The student is told how many words she/he missed and may repeat the lesson.

POTENTIAL USES: "Spelling Bee" seems to be a bit too complicated for the elementary classroom

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Wordwatch, continued

because of the need to adjust the tape recorder and computer. The other programs can be very useful in the classroom if the teacher will take time to input words or definitions appropriate to a particular level. The words already in the program are at the junior high or high school level. Gifted students can profit by recording several versions in "Word Race" or "Hide n' Spell," as suggested in the documentation.

MAJOR STRENGTHS: "Word Race" combines a game with learning; "Hide n' Spell" provides practice in proofreading, in addition to spelling practice. "Spelling Tutor" is beneficial because the student can type in a number of words and can practice spelling the words by using any of three methods.

MAJOR WEAKNESSES: There is much work involved for the teacher, except with "Spelling Tutor." The word lists are limited so several different tapes of data need to be prepared. "Spelling Bee" is too much work for the results, requiring a tape recorder as well as typing. The directions could be more clearly presented both in wording and appearance. The uses of several of the programs can be extended and used for classroom spelling lessons by going into the program and replacing the information in the data statements. A person who did not understand programming may have trouble with this reprogramming.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Evolut

VERSION: Conduit Demonstration Package

PRODUCER: Conduit
P. O. Box 388
Iowa City IA 52244

EVALUATION COMPLETED: June, 1982, by staff and constituents of the Portland Public Schools, Multnomah ESD, Oregon.

COST: $30.00

ABILITY LEVEL: Post-secondary, high ability high school
SUBJECT: Biology, genetics: evolution, natural selection
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II or Apple II+, single disk drive
REQUIRED SOFTWARE: Applesoft, DOS 3.2.1. Note: The packages have a "double boot" feature so that they can be used with DOS 3.3. The packages will be converted for 3.3 in the future.
INSTRUCTIONAL PURPOSE: Enrichment (for Secondary)
INSTRUCTIONAL TECHNIQUES: Computer modeling, Simulation

DOCUMENTATION AVAILABLE: In the computer program: operating instructions and student instructions. In supplementary materials: instructional objectives, prerequisite skills or activities, sample program output, teacher's information, resource/reference information, and student instructions. A supplementary film is also available.

INSTRUCTIONAL OBJECTIVES (Stated): 1. To understand the production of adaptations by the action of selection on random variations. 2. To understand adaptation to specific environmental conditions in relation to survival value. 3. To gain experience in manipulating models of selection acting on populations.

INSTRUCTIONAL PREREQUISITES: 1. An elementary knowledge of genetics and, in particular, the meaning of: alleles, dominance and recessiveness, homozygotes and heterozygotes, and gamete formation and fertilization. 2. An elementary knowledge of ecology. 3. An ability to calculate percentages and plot graphs.

CONTENT AND STRUCTURE: "Evolut" is one of a series of units in biology being produced by Conduit. The package includes a diskette, student notes and a teacher's guide. The program produces charts and tables which display results of the mechanism of natural selection operating on various populations. Supplementary material introduces Darwin's Theory of Evolution, natural selection and variation with directions for student activities. The computer program extends student activities, providing a quick means of observing results over multiple generations, and results when parameters of the selection

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
	●				Content has educational value.
●					Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
		●			Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
			●		Graphics/sound/color are used appropriately.
		●			Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
		●			User support materials are effective.
		●			Information displays are effective.
		●			Users can operate easily and independently.
		●			Teachers can employ package easily.
			●		Computer capabilities are used appropriately.
●					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend use of this package. (Note Major Weaknesses for high school audiences.)

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

ermission to reproduce this document is hereby granted.

Evolut, continued

mechanism are changed. Charts of populations and genetic frequencies may be obtained for as many generations as desired.

ESTIMATED STUDENT TIME REQUIRED: Five hours

POTENTIAL USES: Evaluators indicated that this package would be appropriate for use in high school or college biology or genetics classes for generating results of pea breeding with two gamete types.

MAJOR STRENGTHS: The computer shows results of pairings in genetics much more quickly than could be done by hand; textual material is very well coordinated with the computer program.

MAJOR WEAKNESSES: Certain textual material is unclear (e.g., instructions for "power of selection," p. 11); in the program, certain instructions are ambiguous, and the user must refer to textual material for choices of parameters for subsequent run-throughs; there is too heavy a reliance on numbers and charts, with no use of graphics (evaluators warn this will lose high school students); students require extensive preparation before being able to use the program productively; and while the materials are well coordinated, it would be too time consuming to use all of them.

Permission to reproduce this document is hereby granted.

Minus Mission

VERSION: L 1200

PRODUCER: DLM, Inc.
P. O. Box 4000
Allen, Texas 75002

EVALUATION COMPLETED: April, 1982, by staff and constituents of San Mateo Educational Resources Center, California.

COST: $39.00

ABILITY LEVEL: 1+
SUBJECT: Math, subtraction
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II, color monitor preferable, single disk drive, game paddles are optional.
REQUIRED SOFTWARE: Applesoft DOS 3.2 and 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game, problem solving

DOCUMENTATION AVAILABLE: The program contains information for teachers. Supplementary materials contain information about suggested grade/ability levels, instructional objectives, prerequisite skills and activities, program operating instructions, teacher information, resources and references, student worksheets, and followup activities.

INSTRUCTIONAL OBJECTIVES (Stated): To assist students in the memorization of arithmetic facts in subtraction. Motivation is through an arcade game format. It is hoped there will be consistent recall of the facts in more complex operations and everyday situations. It is designed to work with students of all ages requiring practice using numbers 0-9.

INSTRUCTIONAL PREREQUISITES: The degree of computer familiarity will determine the time needed to explain the object of the game and how it operates.

CONTENT AND STRUCTURE: Minus Mission provides practice in subtraction of numbers 0 through 9 using an arcade game approach. A large green slime drips blobs of slime subtraction facts toward a robot and a laser is activated which fires beams to destroy the slime. If the slime reaches the robot before being destroyed by the correct answer, the robot is disintegrated into a cloud of dust. Answers can be placed on the robot and fired using designated keyboard keys or, if the paddle option is selected, answers appear and must be matched to the problem before firing. Hits and misses are recorded at the top of the screen. The diskette is programmed so that the user can change the parameters of the game. Practice worksheets, thematic flash cards, student progress charts and a teacher guide are included.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
●					Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
●					Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Minus Mission, continued

ESTIMATED STUDENT TIME REQUIRED: Five to ten minutes per day for several weeks.

POTENTIAL USES: The program may be used for an instructional program or as a supplement to the curriculum. This package can be used for review, drill and practice and reinforcement of math subtraction facts. It is an individual activity and can be used as a center within the classroomm. With smaller children, whose motor skills may slow action, teams may help each other taking turns typing and calling out answers. Records may be kept of individual progress and increasingly difficult goals set.

MAJOR STRENGTHS: The excellent graphics and attractive displays as well as the arcade game approach make the program highly motivational. Growth in memorization of facts should definitely follow its use. Options allow tailoring the program to fit a variety of needs. It operates with little teacher attention once loaded and directions for play are understood. The inclusion of the T key for termination of game is handy.

MAJOR WEAKNESSES: One reviewer felt there should be student directions on the screen and that children should be able to make changes in the program themselves to accommodate the rate and speed with which they are comfortable. Major problem seemed to be the length of time for viewing scores or a clear-cut end of game. A definite special key should be hit to continue, as any accidental touch of spacebar to fire sends you right into a new game without pause. A clear "directions of play" card should be included in package to use with students (Simple label form — we made our own).

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Comprehension Power Program

PRODUCER: Milliken Publishing Company
Instructional/Communications Technology
10 Stepar Place
Huntington Station NY 11746

EVALUATION COMPLETED: June 1982 by the Portland Public Schools, Portland, Oregon

VERSION: Level B, level H

COST: $425.00

ABILITY LEVEL: Grades 4-12
SUBJECT: Language arts: reading comprehension
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II or Apple II Plus, single disk drive, monitor or television
REQUIRED SOFTWARE: Applesoft
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, learning management, utility, adjusting reading rate, testing

DOCUMENTATION AVAILABLE: Program operating instructions and student instructions are in the computer program. Suggested grade and ability level, instructional objectives, prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets and material defining comprehension skills are included in the supplementary materials.

INSTRUCTIONAL OBJECTIVES: To develop the ability to follow directions, to provide extensive and varied reading experiences, to improve vocabulary, to preview effectively, to read more rapidly with comprehension and to practice 25 major comprehension skills.

INSTRUCTIONAL PREREQUISITES: Reading comprehension at fourth grade level and familiarity with computer keyboard.

POTENTIAL USES: This package could be used as an individualized course in effective reading, as a supplementary reading program in a language arts class, or as part of a remedial reading class for middle and high school students. The package would also be appropriate in ESL and literacy courses. The package could be used to provide objectives for targeted instruction and to provide feedback both to students and to parents.

MAJOR STRENGTHS: Content is of high interest, students can select their own reading rate, students may vary the reading rate with reading level, vocabulary is introduced in context and the content varies with each choice of reading rate. The student management program was judged to be excellent. Evaluators also rated the list of comprehension skills as comprehensive and well-chosen. Information in the program was described as relevant, up-to-date and written in the style of magazine articles. Evaluators felt students would learn from the content of the articles, in addition to developing the intended reading skills.

MAJOR WEAKNESSES: None

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
●					Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
●					Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Demo-Graphics

VERSION: © 1981

PRODUCER: Conduit
P.O. Box 388
Iowa City, Iowa 52244

EVALUATION COMPLETED: June 1982 by the staff and constituents of Linn-Benton ESD, Oregon.

COST: $85.00 (additional user manuals, $3.50)

ABILITY LEVEL: Grade 8 and above
SUBJECT: Social studies: population studies, demographics
MEDIUM OF TRANSFER: 5 1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II or Apple II Plus with single disk drive
REQUIRED SOFTWARE: DOS 3.2.1 or 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial, simulation

DOCUMENTATION AVAILABLE: Computer program includes sample program output, program operating instructions and student instructions. Supplementary materials include the instructional objectives, sample program output, program operating instructions, teacher's information and student instructions.

INSTRUCTIONAL OBJECTIVES: (Stated) To demonstrate the differential impact of fertility and mortality on age structure; to demonstrate the concept of constant, stable and stationary population; to illustrate life table relations; to compare age standardized birth and death rates for a number of countries; to demonstrate the effect of changing age distribution on dependency ratios; to demonstrate how to construct various fertility and mortality rates.

INSTRUCTIONAL PREREQUISITES: None stated. Materials are designed to introduce the concepts being treated.

CONTENT AND STRUCTURE: This package consists of a disk and a user's manual. The disk contains five programs: Introduction Program, Age Pyramids, Population vs. Time Plots, General Program and Country Editing Program. Generally students use the first four programs and the teacher can use the fifth to enter data on new countries. The introduction program introduces the two types of graphs encountered in the other programs, explains lables on graphs and defines terms. It is recommended that users go through this program first. In the remaining programs, a number of options are available which allow users to examine the effects of changing various population characteristics.

ESTIMATED STUDENT TIME REQUIRED: Thirty minutes per day for one week.

POTENTIAL USES: The program may be used to introduce population issues in full class, small group or individual situations.

MAJOR STRENGTHS: The program allows the user to immediately see results of changing population related variables.

MAJOR WEAKNESSES: Users may change variables only in series, and not simultaneously.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
	•				Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Newton

VERSION: Member's Apple Demonstration Kit

PRODUCER: Conduit
P. O. Box 388
Iowa City, Iowa 52244

EVALUATION COMPLETED: June 1982 by the staff and constituents of the Portland Public Schools, Multnomah ESD, Portland, Oregon.

COST: $35.00

ABILITY LEVEL: Grades 11-12, post-secondary
SUBJECT: Physics
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II or Apple II+, single disk drive, monitor or television
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Simulation

DOCUMENTATION AVAILABLE: The computer program contains program operating instructions and student instructions. Supplmentary materials include the following: instructional objectives, prerequisite skills or activities, teacher's information, resource/reference information, student instructions, followup activities and information about the relationship of the material to standard textbooks. Field test data are available from producers on request.

INSTRUCTIONAL OBJECTIVES (Stated): 1. Extending students' knowledge of projectile motion from the simplest case (a 'flat Earth' and constant gravitational force), to the more general (round Earth, force varying with distance); 2. An appreciation of how the application of Newton's Second Law, and his Law of Gravitation leads to prediction of satellite orbits; 3. Knowledge of the possible shapes of orbits, 4. Some idea of the periodic time of orbits, and of the effect on the orbit of varying launch velocity; 5. The application of a familiar idea (conservation of energy) in a new situation.

INSTRUCTIONAL PREREQUISITES: Prerequisites are stated as basic familiarity with Newton's laws of motion and gravitation.

CONTENT AND STRUCTURE: "Newton" is one of a series of units in physics developed by Conduit. The package is a simulation illustrating Newton's laws of motion, and it is designed to be integrated into existing courses. The package consists of a diskette, student materials and a teacher's guide. Student materials lead students to an approximation of the horizontal velocity needed to keep a body in orbit. The computer program challenges the student to determine the initial velocity required to keep an object in orbit. The program displays the projectile in orbit around Earth and a table of accompanying data. Teacher's materials provide ideas and references for extending and modifying the program.

ESTIMATED STUDENT TIME REQUIRED: Two to three fifty-minute periods

POTENTIAL USES: Evaluators indicate that this package is appropriate for use in a high school or college physics class to demonstrate (simulate) the trajectory required to put an object into orbit.

MAJOR STRENGTHS: Numeric description accompanies graphic representation of the height and shape of each orbit; and student materials contain illustrations and questioning strategies which are involving and lead the student into the use of the computer program.

MAJOR WEAKNESSES: The plotting of the trajectory is extremely slow. The program could be improved by allowing it to run longer. It was felt that the program stops too frequently.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
•					Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

More Algebra: Slope

PRODUCER: Tycom Associates
68 Velma Avenue
Pittsfield, Mass. 01201

EVALUATION COMPLETED: March 1982 by the staff and constituents of the Jefferson County Public Schools, Denver, Co.

COST: $19.95 (5 programs on one cassette.)

ABILITY LEVEL: High School Algebra
SUBJECT: Mathematics: Algebra (slope and distance, simultaneous equations, quadratic equations)
MEDIUM OF TRANSFER: Tape cassette
REQUIRED HARDWARE: 8K to 32K Commodore PET with tape drive
REQUIRED SOFTWARE: Commodore Basic in firmware
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer programs includes the following: instructional objectives, sample program output, program operating instructions, teacher's information and student instructions. Supplementary materials contain the following: suggested grade/ability levels, instructional objectives, program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Stated): The package is intended as drill and practice for students who are enrolled in an algebra course (first or second year) as well as review for those who have already completed a course. A brief review lesson accompanies each exercise, but review lessons are not intended as stand-alone tutorial.

INSTRUCTIONAL PREREQUISITES: Users of this package should have received instruction in the major concepts the package covers.

CONTENT AND STRUCTURE: This package consists of five programs which provide review and practice in solving common types of algebra programs. Programs included are: SLOPE (the graph of two ordered pairs is shown and the user is asked to enter the slope of the line containing these points as well as the square of the distance between the points); SIMUL (pairs of simultaneous linear equations are given for solution by the user); QUAD (the user is asked to enter roots of quadratic equations); DISC (provides practice problems in the use of the discriminant to determine the nature of the roots of a quadratic equation); COMP (the user provides complex roots of a quadratic equation). Programs automatically keep score, and upon exiting, the user is informed of the number of problems attempted and given a grade.

POTENTIAL USES: (Slope): The program provides drill in calculating the slope of a line through two given points and measuring the square of the distance between the points.

MAJOR STRENGTHS: None given.

MAJOR WEAKNESSES: (Slope): The display of the second part of the problem (square of the distance) is difficult to comprehend; and the program is limited in that it only simulates an exercise sheet that provides immediate reinforcement. Evaluators also criticized the lack of comprehensive and effective user support materials.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
		●			Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
			●		Use of package is motivational.
			●		Student creativity is effectively stimulated.
			●		Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
		●			Learning can be generalized.
			●		User support materials are comprehensive.
			●		User support materials are effective.
		●			Information displays are effective.
		●			Users can operate easily and independently.
		●			Teachers can employ package easily.
		●			Computer capabilities are used appropriately.
		●			Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would not use or recommend this package. (See major weaknesses.)

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Apple*Surface

PRODUCER: Conduit
P. o. Box 388
Iowa City IA 52244

COST: $40.00; additional student guides, $2.50

EVALUATION COMPLETED: June 1982 by the Portland Public Schools, Portland, Oregon

ABILITY LEVEL: Advanced placement
SUBJECT: Mathematics: graphic of functions of two variables
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, single disk drive
REQUIRED SOFTWARE: DOS 3.3
INSTRUCTIONAL PURPOSE: Enrichment
INSTRUCTIONAL TECHNIQUES: Graphing, laboratory approach

DOCUMENTATION AVAILABLE: Suggested grade and ability level, sample program output, program operating instructions and student instructions are included in the computer program. Supplementary materials contain suggested grade and ability level, instructional objectives, prerequisite skills or activities, program operating instructions, teacher's information and student instructions.

INSTRUCTIONAL OBJECTIVES: 1) The ability to visualize the graphs of functions of two variables; 2) the ability to visualize x-level and y-level curves on these surfaces as an application of functions of one variable; 3) understanding of the importance of the domain of a function and ability to express the domain by one or more inequalities; 4) understanding of scale changes in each of the coordinate directions and of the role of proper scaling in achieving of useful graphs; 5) rudimentary understanding of perspective projections from three-dimensional space to a plane, with identification of the viewpoint as an application of spherical coordinates; 6) understanding of the classification of quadric surfaces and ability to determine a surface from a standard form equation; 7) ability to carry out appropriate explorations with a new function to discover the important features of its graph.

INSTRUCTIONAL PREREQUISITES: Knowledge of functions, specifically functions of two variables.

CONTENT AND STRUCTURE: Single disk and manual

ESTIMATED STUDENT TIME REQUIRED: Variable

POTENTIAL USES: Appropriate in class demonstrations on multivarible function analysis and in a laboratory discovery learning situation.

MAJOR STRENGTHS: Allows students to visualize graphs in two variables. This is nearly impossible to do without a program such as this.

MAJOR WEAKNESSES: It takes a lot of time to learn to operate the program effectively. The student must study the manual carefully before trying to work with the program.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this program with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Sentences

VERSION: Apple II

PRODUCER: Micro Power & Light Company
12820 Hillcrest Rd., Suite 224
Dallas, Texas 75230

EVALUATION COMPLETED: June 1982 by the staff and constituents of the Portland Public Schools, Multnomah ESD, Portland, Oregon.

COST: $24.95

ABILITY LEVEL: Grade 5 and above
SUBJECT: Language arts: subject and verb recognition
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 32K Apple II with single disk drive and a monitor
REQUIRED SOFTWARE: Applesoft in ROM
INSTRUCTIONAL PURPOSE: Standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game

DOCUMENTATION AVAILABLE: The computer program contains program operating instructions and instructions for the student.

INSTRUCTIONAL OBJECTIVES: (Inferred): Students will identify subject, simple subjects, predicate and verb of sentences; students will combine sentence fragments to make complete sentences.

INSTRUCTIONAL PREREQUISITES: (Inferred): Understanding the terms verb and predicate.

CONTENT AND STRUCTURE: The program provides drill in the format of a baseball game. Instruction covering subjects and verbs is provided.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes.

POTENTIAL USES: None given

MAJOR STRENGTHS: None given

MAJOR WEAKNESSES: The following major weaknesses resulted in the recommendation that the package not be used: (1) directions are incorrect — for example, the user is instructed to use the space bar when in fact the return key is required; (2) terms are not introduced in the proper sequence; (3) feedback to students is not correct; (4) typing mistakes may not be corrected; (5) the format of the program is inconsistent; (6) a student can win by correcting a mistake — there is no final score.

EVALUATION SUMMARY

SA	A	D	SD	NA	
			•		Content is accurate.
		•			Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
		•			Package achieves defined purpose.
			•		Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
				•	User support materials are comprehensive.
				•	User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
		•			Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend this package. (See Major Weaknesses.)

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Millikan

VERSION: © 1979

PRODUCER: Mentor Software, Inc.
Box 8082
St. Paul, Minnesota 55113

EVALUATION COMPLETED: March 14, 1982 by the staff and constituents of Texas Region X Educational Service Center

COST: $19.95

ABILITY LEVEL: Grade 11+
SUBJECT: Physics: Millikan Oil Drop Experiment
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II or Apple II+ with one disk drive
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Problem solving, simulation

DOCUMENTATION AVAILABLE: The computer program contains student instructions. Supplementary materials include the following: suggested grade/ability level(s), instructional objectives, prerequisite skills/activities, program operating instructions, teacher's information and student worksheets.

INSTRUCTIONAL OBJECTIVES (Stated): Students will be able to describe the principles involved in the Millikan Oil Drop Experiment, and given the necessary experimental data, students will determine the charge on a single electron.

INSTRUCTIONAL PREREQUISITES: (Inferred): Instruction in concepts underlying the measurement of an electron's charge.

CONTENT AND STRUCTURE: This package provides a simulation of the Millikan Oil Drop Experiment. By varying voltage across plates, students find conditions that keep drops stationary. Listing and alteration of this program are not permitted.

ESTIMATED STUDENT TIME REQUIRED: (Approximately) 20-30 minutes

POTENTIAL USES: The program may be used in a classroom setting to provide practice in working up a famous experiment without the hazards and costs of the necessary equipment to perform this complex experiment. The program may also be used as a demonstration, a pre-lab activity, or as an alternative to the school's actual laboratory experiment.

MAJOR STRENGTHS: The program is an example of the use of a computer for an activity which is difficult to set up and carry out and for which a number of repetitions in a short time period is desirable but difficult using actual apparatus.

MAJOR WEAKNESSES: The Millikan worksheet should have a space for percent of error.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Spanish Hangman

VERSION: © 1978

PRODUCER: George Earl
1302 S. General McMullen
San Antonio, Texas 78237

EVALUATION COMPLETED: May 12, 1982 by the staff and constituents of Lehigh University

COST: $29.95

ABILITY LEVEL: First, second year Spanish students
SUBJECT: Spanish: vocabulary
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 32K Apple II with single disk drive
REQUIRED SOFTWARE: DOS 3.2
INSTRUCTIONAL PURPOSE: Remediation, enrichment
INSTRUCTIONAL TECHNIQUES: Game

DOCUMENTATION AVAILABLE: The computer program contains the program operating instructions and student instructions.

INSTRUCTIONAL OBJECTIVES: Instructional objectives are not stated.

INSTRUCTIONAL PREREQUISITES: Instructional prerequisites are not stated.

CONTENT AND STRUCTURE: This package consists of a single program on a disk. The program uses the "Hangman" format to teach vocabulary and correct spelling.

ESTIMATED STUDENT TIME REQUIRED: Fifteen to twenty minutes

POTENTIAL USES: This program would be appropriate in a Spanish course, levels one and two as a way to reinforce new vocabulary and correct spelling.

MAJOR STRENGTHS: The program effectively drills students on vocabulary in either Spanish to English or English to Spanish. Graphics are effective, and help provides immediate feedback to students.

MAJOR WEAKNESSES: The program does not contain accents or the tilde, which is essential to Spanish. Teachers may not generate their own vocabulary for use in the program, and the program provides no information on how to stop the game, if the user does not wish to go all the way through it.

EVALUATION SUMMARY

SA	A	D	SD	NA	
		•			Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
					User support materials are comprehensive.
					User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this program only if certain changes were made. (See Major Weaknesses.)

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Homonyms in Context

VERSION: Apple II

PRODUCER: Random House, School Division
2970 Brandywine Road
Atlanta, Georgia 30341

EVALUATION COMPLETED: June 1982 by the staff and constituents of the Portland Public Schools, Portland, Oregon.

COST: Apple II and Radio Shack TRS-80 Model III disk, $60.00. Models I and III cassette, $39.00

ABILITY LEVEL: Grades 3-9
SUBJECT: Language arts: reading
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II or Apple II Plus, with single disk drive and monitor or television. (also available for TRS 80 models I, III with cassette or disk drive)
REQUIRED SOFTWARE: DOS 3.3 (for Apple II version)
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: Computer program includes prerequisite skills and activities, program operating instructions and followup activities. Supplementary materials include suggested grade/ability levels, instructional objectives, prerequisite skills/activities, program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: Provide drill and practice in recognition of homonyms within a given context.

INSTRUCTIONAL PREREQUISITES: (Not stated) Reviewers infer that users have received instruction covering the idea of homonyms, and that users can spell (and read) words that are presented.

CONTENT AND STRUCTURE: This package presents a series of six lessons of increasing levels of difficulty (third grade through high school). Each lesson consists of 25 contextual sentences for which the student must choose the appropriate homonym. An incorrect response (or allowing the 12 second time limit to expire) causes the correct word to appear. Then the next frame presents the same sentence again. A new sentence is not presented until the student has entered the correct answer. At the end of the lesson, the program reviews the sentences the student missed. Lessons are in increasing difficulty, based on vocabulary and context of sentences. At the end of each lesson, there is a short game the student may play.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes per level (six levels)

POTENTIAL USES: The package would be appropriate as part of the instructional program at the indicated grade levels.

MAJOR STRENGTHS: The program provides an immediate, personalized response. There is an opportunity to correct incorrect responses. The program includes a range of difficulty levels, and the program is easily managed by students. The game at the end of each lesson was viewed as motivational.

MAJOR WEAKNESSES: Some reviewers felt that the material intended for grades 7-9 was too simple for that level. Others felt it was appropriate. The program could be improved by allowing teachers to tailor the program by selecting the number of trials and the homonym pairs in the lessons. It was felt that teachers could not make changes to meet particular student needs.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
		•			Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
•					Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

More Algebra: Comp

PRODUCER: Tycom Associates
68 Velma Avenue
Pittsfield, Mass. 01201

EVALUATION COMPLETED: March 1982 by the staff and constituents of the Jefferson County Public Schools, Denver, Co.

COST: $19.95 (5 programs on one cassette.)

ABILITY LEVEL: High School Algebra
SUBJECT: Mathematics: Algebra (slope and distance, simultaneous equations, quadratic equations)
MEDIUM OF TRANSFER: Tape cassette
REQUIRED HARDWARE: 8K to 32K Commodore PET with tape drive
REQUIRED SOFTWARE: Commodore Basic in firmware
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer programs includes the following: instructional objectives, sample program output, program operating instructions, teacher's information and student instructions. Supplementary materials contain the following: suggested grade/ability levels, instructional objectives, program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Stated): The package is intended as drill and practice for students who are enrolled in an algebra course (first or second year) as well as review for those who have already completed a course. A brief review lesson accompanies each exercise, but review lessons are not intended as stand-alone tutorial.

INSTRUCTIONAL PREREQUISITES: Users of this package should have received instruction in the major concepts the package covers.

CONTENT AND STRUCTURE: This package consists of five programs which provide review and practice in solving common types of algebra programs. Programs included are: SLOPE (the graph of two ordered pairs is shown and the user is asked to enter the slope of the line containing these points as well as the square of the distance between the points); SIMUL (pairs of simultaneous linear equations are given for solution by the user); QUAD (the user is asked to enter roots of quadratic equations); DISC (provides practice problems in the use of the discriminant to determine the nature of the roots of a quadratic equation); COMP (the user provides complex roots of a quadratic equation). Programs automatically keep score, and upon exiting, the user is informed of the number of problems attempted and given a grade.

POTENTIAL USES: The package provides drill in calculating complex roots of a quadratic equation using formulas. Evaluators found the package useful only as a substitute for a book or exercise sheet with answers.

MAJOR STRENGTHS: None given.

MAJOR WEAKNESSES: Use of reverse field to display the quadratic was not particularly appropriate; the package uses the computer as a problem generator, while actual problem solving is done with pencil and paper. The package lacks support materials.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
			•		Purpose of package is well defined.
		•			Package achieves defined purpose.
			•		Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
			•		Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
			•		Information displays are effective.
		•			Users can operate easily and independently.
			•		Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would not use or recommend use of the package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

More Algebra: Disc

PRODUCER: Tycom Associates
68 Velma Avenue
Pittsfield, Mass. 01201

EVALUATION COMPLETED: March 1982 by the staff and constituents of the Jefferson County Public Schools, Denver, Co.

COST: $19.95 (5 programs on one cassette.)

ABILITY LEVEL: High School Algebra
SUBJECT: Mathematics: Algebra (slope and distance, simultaneous equations, quadratic equations)
MEDIUM OF TRANSFER: Tape cassette
REQUIRED HARDWARE: 8K to 32K Commodore PET with tape drive
REQUIRED SOFTWARE: Commodore Basic in firmware
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer programs includes the following: instructional objectives, sample program output, program operating instructions, teacher's information and student instructions. Supplementary materials contain the following: suggested grade/ability levels, instructional objectives, program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Stated): The package is intended as drill and practice for students who are enrolled in an algebra course (first or second year) as well as review for those who have already completed a course. A brief review lesson accompanies each exercise, but review lessons are not intended as stand-alone tutorial.

INSTRUCTIONAL PREREQUISITES: Users of this package should have received instruction in the major concepts the package covers.

CONTENT AND STRUCTURE: This package consists of five programs which provide review and practice in solving common types of algebra programs. Programs included are: SLOPE (the graph of two ordered pairs is shown and the user is asked to enter the slope of the line containing these points as well as the square of the distance between the points); SIMUL (pairs of simultaneous linear equations are given for solution by the user); QUAD (the user is asked to enter roots of quadratic equations); DISC (provides practice problems in the use of the discriminant to determine the nature of the roots of a quadratic equation); COMP (the user provides complex roots of a quadratic equation). Programs automatically keep score, and upon exiting, the user is informed of the number of problems attempted and given a grade.

POTENTIAL USES: The package provides drill in identifying number and types of roots of a quadratic equation using the discriminant. Evaluators found the package to have value only as an exercise sheet with answers, and as such, to be of limited usefulness.

MAJOR STRENGTHS: The use of reverse field for purposes of highlighting was a strength.

MAJOR WEAKNESSES: The package contains no explanations — only rules. The package generates quadratic equations whose coefficients may be used in a paper and pencil calculation of discriminants. The program provides no assistance when an incorrect response is given. The package lacks support materials.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
			•		Purpose of package is well defined.
		•			Package achieves defined purpose.
			•		Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
			•		Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
			•		Information displays are effective.
		•			Users can operate easily and independently.
			•		Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend this package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

More Algebra: Quad

PRODUCER: Tycom Associates
68 Velma Avenue
Pittsfield, Mass. 01201

EVALUATION COMPLETED: March 1982 by the staff and constituents of the Jefferson County Public Schools, Denver, Co.

COST: $19.95 (5 programs on one cassette.)

ABILITY LEVEL: High School Algebra
SUBJECT: Mathematics: Algebra (slope and distance, simultaneous equations, quadratic equations)
MEDIUM OF TRANSFER: Tape cassette
REQUIRED HARDWARE: 8K to 32K Commodore PET with tape drive
REQUIRED SOFTWARE: Commodore Basic in firmware
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer programs includes the following: instructional objectives, sample program output, program operating instructions, teacher's information and student instructions. Supplementary materials contain the following: suggested grade/ability levels, instructional objectives, program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Stated): The package is intended as drill and practice for students who are enrolled in an algebra course (first or second year) as well as review for those who have already completed a course. A brief review lesson accompanies each exercise, but review lessons are not intended as stand-alone tutorial.

INSTRUCTIONAL PREREQUISITES: Users of this package should have received instruction in the major concepts the package covers.

CONTENT AND STRUCTURE: This package consists of five programs which provide review and practice in solving common types of algebra programs. Programs included are: SLOPE (the graph of two ordered pairs is shown and the user is asked to enter the slope of the line containing these points as well as the square of the distance between the points); SIMUL (pairs of simultaneous linear equations are given for solution by the user); QUAD (the user is asked to enter roots of quadratic equations); DISC (provides practice problems in the use of the discriminant to determine the nature of the roots of a quadratic equation); COMP (the user provides complex roots of a quadratic equation). Programs automatically keep score, and upon exiting, the user is informed of the number of problems attempted and given a grade.

POTENTIAL USES: None given

MAJOR STRENGTHS: None given.

MAJOR WEAKNESSES: Students are required to use pencil and paper; the program contains inaccuarate information; roots of a quadratic equation are presented as (for example) -2 and +1 instead of as -2 or +1.

EVALUATION SUMMARY

SA	A	D	SD	NA	
		•			Content is accurate.
		•			Content has educational value.
•					Content is free of stereotypes.
			•		Purpose of package is well defined.
		•			Package achieves defined purpose.
			•		Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
			•		Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
			•		Information displays are effective.
		•			Users can operate easily and independently.
			•		Teachers can employ package easily.
			•		Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend use of this package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

More Algebra: Simul

PRODUCER: Tycom Associates
68 Velma Avenue
Pittsfield, Mass. 01201

EVALUATION COMPLETED: March 1982 by the staff and constituents of the Jefferson County Public Schools, Denver, Co.

COST: $19.95 (5 programs on one cassette.)

ABILITY LEVEL: High School Algebra
SUBJECT: Mathematics: Algebra (slope and distance, simultaneous equations, quadratic equations)
MEDIUM OF TRANSFER: Tape cassette
REQUIRED HARDWARE: 8K to 32K Commodore PET with tape drive
REQUIRED SOFTWARE: Commodore Basic in firmware
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer programs includes the following: instructional objectives, sample program output, program operating instructions, teacher's information and student instructions. Supplementary materials contain the following: suggested grade/ability levels, instructional objectives, program operating instructions and teacher's information.

INSTRUCTIONAL OBJECTIVES: (Stated): The package is intended as drill and practice for students who are enrolled in an algebra course (first or second year) as well as review for those who have already completed a course. A brief review lesson accompanies each exercise, but review lessons are not intended as stand-alone tutorial.

INSTRUCTIONAL PREREQUISITES: Users of this package should have received instruction in the major concepts the package covers.

CONTENT AND STRUCTURE: This package consists of five programs which provide review and practice in solving common types of algebra programs. Programs included are: SLOPE (the graph of two ordered pairs is shown and the user is asked to enter the slope of the line containing these points as well as the square of the distance between the points); SIMUL (pairs of simultaneous linear equations are given for solution by the user); QUAD (the user is asked to enter roots of quadratic equations); DISC (provides practice problems in the use of the discriminant to determine the nature of the roots of a quadratic equation); COMP (the user provides complex roots of a quadratic equation). Programs automatically keep score, and upon exiting, the user is informed of the number of problems attempted and given a grade.

POTENTIAL USES: None given

MAJOR STRENGTHS: None given.

MAJOR WEAKNESSES: Evaluators judged this program to be an example of poor pedagogy. They criticized displays of examples of solutions to simultaneous equations in two variables.

EVALUATION SUMMARY

SA	A	D	SD	NA	
		•			Content is accurate.
		•			Content has educational value.
	•				Content is free of stereotypes.
			•		Purpose of package is well defined.
			•		Package achieves defined purpose.
			•		Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
			•		Use of package is motivational.
			•		Student creativity is effectively stimulated.
			•		Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
			•		Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
			•		Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend use of this package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Grammar Problems for Practice: Homonyms

PRODUCER: Milliken Publishing Company
1100 Research Blvd.
St. Louis MO 63132

EVALUATION COMPLETED: June 1982, by staff of the Portland Public Schools, Multnomah ESD, Portland, Oregon.

COST: $80 per module; $375 for series of 5 modules.

ABILITY LEVEL: 3-9
SUBJECT: Language Arts: Grammar and Usage, Homonyms
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II, Single disk drive, B & W monitor
REQUIRED SOFTWARE: DOS 3.2, 3.3; Applesoft
INSTRUCTIONAL PURPOSE: Assessment, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, learning management

DOCUMENTATION AVAILABLE: In the program: student instructions, followup activities, and posttesting. In supplementary materials: suggested grade/ability levels, instructional objectives, program operating instructions, teacher's information, resource/reference information, and information about the program's relationship to standard textbooks.

INSTRUCTIONAL OBJECTIVES (Stated): to provide individual drill and practice for students on troublesome homonyms and word pairs, using skills and concepts already introduced by teachers.

INSTRUCTIONAL PREREQUISITES (Inferred): Students should already be familiar with the concept of homonyms and should have had considerable practice using them in drill and practice situations.

CONTENT AND STRUCTURE: This package contains eight tests on homonyms covering simple homonyms, contraction homonyms, triple homonyms and confusing pairs. Students must pass tests at 90% or better to move on to another test. Failure to pass at the 90% or better level results in additional drill and practice experience. This package also contains a useable student management program component. This package is one component of an integrated program series covering English grammar.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes per day until the material is mastered.

POTENTIAL USES: This package would be useful in a classroom setting for drill and practice or testing of student knowledge of homonyms. It would not be useful for basic instruction, and students should probably have had considerable paper practice on homonyms prior to using the program.

MAJOR STRENGTHS: The program contains student and class management components which allow the teacher to assign work (drill and practice) as needed by students. The material in the program had been correlated with basal language arts texts. The material includes a scope and sequence chart.

MAJOR WEAKNESSES: The program does not make adequate use of the more creative aspects of a computer. A more extensive teacher's guide with student support materials would be helpful.

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
●					Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
		●			Use of package is motivational.
			●		Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
		●			User support materials are comprehensive.
		●			User support materials are effective.
		●			Information displays are effective.
	●				Users can operate easily and independently.
●					Teachers can employ package easily.
			●		Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Essential Math Program

VERSION: Catalog No. 26-1716 (1980)

PRODUCER: Radio Shack
Education Division
400 Atrium, One Tandy Center
Fort Worth TX 76102

EVALUATION COMPLETED: June, 1982, by staff and constituents of the Portland Public Schools and Linn-Benton ESD, Oregon.

COST: $199.00

ABILITY LEVEL: 7-12
SUBJECT: Math: addition, subtraction, multiplication, division, and number concepts
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 16K Radio Shack Model I or Model III with either disk drive or cassette recorder
REQUIRED SOFTWARE: Basic, TRSDOS
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: The computer program offers a pretest for placement purposes. Supplementary documentation includes: suggested grade/ability level(s); instructional objectives; prerequisite skills or activities; sample program output; teacher's information; and student's instructions.

INSTRUCTIONAL OBJECTIVES: Objectives are stated in Appendix I of the written materials, cover standard elementary basic arithmetic operation skills.

INSTRUCTIONAL PREREQUISITES: Prerequisites are also stated in Appendix I, include some prior instruction in arithmetic operations.

CONTENT AND STRUCTURE: This program includes skill building exercises, a placement mode, and lesson content summaries for addition, subtraction, multiplication, division and number concepts in grades 7 through 12. The package consists of an integrated program series of programs.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes daily.

POTENTIAL USES: Use the program in classroom or lab for drill and practice.

MAJOR STRENGTHS: 1. The program contains individualized exercises in number concepts not usually found in K-8 math. 2. Supplemental materials make the program easy to learn to use. 3. Complete content description by lesson is found in Appendix I.

MAJOR WEAKNESSES: 1. The program can only be used for drill and practice. 2. The program does not provide for erasure of an incorrect response. The student is not able to correct mistakes.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Fundamental Math I, II, III

PRODUCER: Random House, School Division
2970 Brandywine Road
Atlanta, Georgia 30341

EVALUATION COMPLETED: June 23, 1982 by the staff and constituents of the Portland Public Schools.

COST: Total Package: 16K Cassette, $459; 48K Disk, $600; 48K Disk and Management System, $699

	Math I	II	III
16K Cassette	$ 84	$288	$198
48K Cassette	105	369	258
48K Disk & Management	150	420	315

ABILITY LEVEL: Grades 1-9
SUBJECT: Math: number concepts, addition, subtraction, multiplication, fractions, decimals, and percents
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 16K-48K Radio Shack Model III, single disk drive. Also available: TRS 80 I/M 16K cassette; TRS 80 48K disk and management system (requires 2 disk drives)
REQUIRED SOFTWARE: Basic, TRSDOS
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, game

DOCUMENTATION AVAILABLE: Extensive suplementary materials contain the following kinds of documentation: suggested grade/ability level(s); instructional objectives; prerequisite skills or activities; sample program outputs; program operating instructions; pre- and post-tests; teacher's information; resource/reference information; student's instructions; and a description of the program's relationship to standard textbooks. In addition, the program contains instructions to students.

INSTRUCTIONAL OBJECTIVES: Instructional objectives covering fundamental math concepts are stated.

INSTRUCTIONAL PREREQUISITES: Instructional prerequisites are stated.

CONTENT AND STRUCTURE: The package consists of more than 450 lessons covering math skills in addition, subtraction, multiplication, division, number concepts, fractions, decimals, and pre-algebra. It contains lessons for grades 1-9. The package includes complete scope and sequence, assessment and scoring, and lesson content and objectives. This package is a component of an integrated program series, and the computer program may be listed and altered.

ESTIMATED STUDENT TIME REQUIRED: Fifteen to twenty minutes daily.

POTENTIAL USES: The program may be used for drill and practice in the classroom or lab setting.

MAJOR STRENGTHS: The package contains supplementary materials; it covers grades 1-9; it covers many topics; and it contains extra activities for many lessons.

MAJOR WEAKNESSES: Not all lessons contained extra activities (specifically, fractions, decimals, and pre-algebra did not contain extra activities). Program errors were found in the lesson covering number concepts.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
•					Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
•					User support materials are comprehensive.
•					User support materials are effective.
•					Information displays are effective.
•					Users can operate easily and independently.
					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

English Computorials

PRODUCER: Educulture
1 Dubuque Plaza, Suite 803
Dubuque, Iowa 52001

EVALUATION COMPLETED: May 1982 by the staff and constituents of Lehigh University and Bethlehem PA Public Schools.

VERSION: Examination Package (Evaluators were unable to determine certain information because they were evaluating a demonstration package.)

COST: Computorials I-V: $625; individual computorials: $125; cassette player: $125

ABILITY LEVEL: Grades 10-college
SUBJECT: English
MEDIUM OF TRANSFER; Tape cassette or 5 1/4" flexible disk
REQUIRED HARDWARE: Apple II or Apple II Plus with disk drive and special computorial audio cassette player
REQUIRED SOFTWARE: Applesoft, DOS 3.2.1 or DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, problem solving

DOCUMENTATION AVAILABLE: The computer program contains the instructional objectives, program operating instructions, pre- and post-tests, resource and reference information and teacher's information. Supplementary materials provide information for the teacher.

INSTRUCTIONAL PREREQUISITES: Not stated

ESTIMATED STUDENT TIME REQUIRED: Approximately 2 1/2 hours per section

POTENTIAL USES: To diagnose student strengths and weaknesses in English grammar, and based on the diagnosis, to provide tutorials for instruction in areas of weakness.

MAJOR STRENGTHS: The diagnosis of student knowledge and provision for acquisition of knowledge and skill application.

MAJOR WEAKNESSES: 1. The use of vocabulary such as "appropriate" when referring to linking verbs is vague. Because its meaning is unclear, more than one response should be correct. 2. Pressing the wrong key can produce a correct response. For instance in the "Get Acquainted" lesson, the "?" key produces the same results as the space bar; in lesson 36 the user is not oriented to pressing the actual keys needed to supply the correct response. 3. The need for the audio accessory is a hindrance. 4. The target audience for this package is not identified.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
				•	Content presentation is clear and logical.
					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
•					Use of package is motivational.
				•	Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
•					Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
					Learning can be generalized.
					User support materials are comprehensive.
					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Titration

VERSION: 1980

PRODUCER: Mentor Software, Inc.
Box 8082
St. Paul, Minn. 55113

EVALUATION COMPLETED: April 1982, by staff and constituents of the Texas Region X Educational Service Center.

COST: $19.95

ABILITY LEVEL: Grades 10-14
SUBJECT: Chemistry: titration
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, single disk drive
REQUIRED SOFTWARE: DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: Supplementary materials include suggested grade/ability levels, instructional objectives, program operating instructions, student instructions and student worksheets.

INSTRUCTIONAL OBJECTIVES: Instructional objectives are stated.

INSTRUCTIONAL PREREQUISITES (Inferred): Users should have had science instruction at the 9-10 grade level.

CONTENT AND STRUCTURE: The program simulates an acidic or basic titration of a solution of unknown strength. The necessary equipment is displayed graphically. After the titration has been completed the user is tutored in performing the necessary calculations. The results are compared to the actual normality of the unknown solution.

ESTIMATED STUDENT TIME REQUIRED: Twenty minutes.

POTENTIAL USES: This package can be used as a pre-lab for students to perform before doing an actual titration experiment in the laboratory. It could also be used by an instructor for purposes of demonstration.

MAJOR STRENGTHS: The computer responses are "friendly," and the activities involve students in appropriate ways.

MAJOR WEAKNESSES: The terms "acid solution" and "basic solution" need to be added to the definition sheet.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
•					User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
		•			Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made. (See Major Weaknesses.)

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Grammar Package 1

VERSION: TRS-80

PRODUCER: Micro Learning Ware
P. O. Box 2134
N. Mankato, MN 56001

EVALUATION COMPLETED: June 22, 1982 by the staff and constituents of the Portland Public Schools, Portland, Oregon.

COST: $24.95

ABILITY LEVEL: 4-5
SUBJECT: Language arts
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Radio Shack TRS-80, Models I & III, with disk drive (also available for Apple II, PET)
REQUIRED SOFTWARE: (Apple II: Applesoft, DOS 3.3)
INSTRUCTIONAL PURPOSE: Remediation, Assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice

DOCUMENTATION AVAILABLE: Documentation available in the computer program includes program operating instructions and student's instructions.

INSTRUCTIONAL OBJECTIVES (Inferred): Students will recognize words in syntax that belong to a particular grammatical classification.

INSTRUCTIONAL PREREQUISITES (Inferred): An introduction to parts of speech, previous drill and practice, and an understanding of how to use computers.

CONTENT AND STRUCTURE: The package is made of six programs which appear on a menu. Teachers may make additional sentences, but students would be unable to tell whether their responses to the added sentences were correct or not. Sentence structure is very basic and uncreative. This package is one component of an integrated program series, and listing and alteration of the program is allowed.

ESTIMATED STUDENT TIME REQUIRED: Thirty minutes per day for twelve days.

POTENTIAL USES: Drill and practice.

MAJOR STRENGTHS: Provision for inserting one's own sentences.

MAJOR WEAKNESSES: (1) The package is boring and is an unimaginative application of drill and practice; (2) The program uses the same sentences throughout the menu; (3) There is no pre- or post-test; (4) No printed material on goals and objectives is available.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
		•			Content is free of stereotypes.
		•			Purpose of package is well defined.
		•			Package achieves defined purpose.
	•				Content presentation is clear and logical.
				•	Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
			•		Student creativity is effectively stimulated.
		•			Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
				•	User support materials are comprehensive.
				•	User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
		•			Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend this package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Elementary Mathematics Classroom Learning System: Whole Numbers

VERSION: English Language

PRODUCER: Sterling Software
Sterling Swift Publishing Co.
1600 Fortview Road
Austin, Texas 78704

EVALUATION COMPLETED: May 1982 by the Program for Research and Evaluation in Public Schools (PREPS), Mississippi. Evaluators indicated that this evaluation was based partly on their observation of student use of this package.

COST: $495

ABILITY LEVEL: Grades 4-7
SUBJECT: Mathematics: whole number operations
MEDIUM OF TRANSFER: 5 1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II Plus, one disk drive; a printer for use by the teacher is recommended but not required.
REQUIRED SOFTWARE: DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, information retrieval, game, simulation, problem solving

DOCUMENTATION AVAILABLE: The computer program includes pre- and post-tests and student instructions. The supplementary materials include the suggested grade and ability level, instructional objectives, sample program output, program operating instructions and teacher's information

INSTRUCTIONAL OBJECTIVES: Standard objectives for basic operations with whole numbers are stated for each section in the package.

INSTRUCTIONAL PREREQUISITES: (Inferred) Math skills appropriate to the fourth grade level.

CONTENT AND STRUCTURE: The package consists of six disks and a documentation manual. One disk is a management disk, which can accommodate up to five classes of forty students at a time. Basic math operations are covered on each of four disks (addition, subtraction, multiplication and division). The sixth disk contains games to be used to reinforce the student's work. All course material deals with whole numbers and each disk is sequenced so that easier material is dealt with before more difficult material. The program provides teachers with an accurate report of student progress.

POTENTIAL USES: (1) As a "catch-up" for slow students or students who were absent when material was being covered. (2) As a review for all students. (3) As an exercise emphasizing the role of place value in all operations. (4) As a method of increasing the student's speed in computations. (5) As a way of reinforcing the major operations in the four basic skill areas in mathematics.

MAJOR STRENGTHS: (1) Material is presented in increasing levels of difficulty. (2) The package provides repetition of basic skills. (3) The package can be used with students of different ability levels. (4) Place value is stressed and (5) the games provide a good challenge to the students.

MAJOR WEAKNESSES: (1) The first game could not be played without paddles. (2) the games would be too difficult for some students, especially slow learners, to complete successfully. (3) When carrying an operation to another place value, it was difficult to remember what was carried.

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
●					Content has educational value.
●					Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
●					Content presentation is clear and logical.
●					Difficulty level is appropriate to audience.
●					Graphics/sound/color are used appropriately.
●					Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
●					Learner controls rate and sequence.
●					Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
●					Information displays are effective.
●					Users can operate easily and independently.
	●				Teachers can employ package easily.
●					Computer capabilities are used appropriately.
●					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Energy Czar

VERSION: CZ 4121

PRODUCER: Atari, Inc.
60 E. Plumeria
P.O. Box 50047
San Jose, California 95050

EVALUATION COMPLETED: September 1982 by the staff and constituents of the Capital Children's Museum.

COST: $14.95

ABILITY LEVEL: Grade 7-Adult
SUBJECT: Energy, Economics
MEDIUM OF TRANSFER: Tape Cassette
REQUIRED HARDWARE: Atari 400 or 800 with 16K Ram, Atari 410 cassette recorder, monitor or television
REQUIRED SOFTWARE: Atari Basic (Cartridge)
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Tutorial, information retrieval, simulation, problem solving

DOCUMENTATION AVAILABLE: Supplementary materials include suggested grade/ability levels, instructional objectives, sample program output, program operating instructions, and resource/reference information.

INSTRUCTIONAL OBJECTIVES (Stated): 1. Problem solving, 2. Developing an understanding about the relationship between energy issues, economic and politics, 3. Logical thinking, 4. Decision making

INSTRUCTIONAL PREREQUISITES (Inferred): 1. Ability to set up and operate the computer system, 2. Fundamental understanding of energy sources and alternatives, 3. Understanding of stakes involved in basic energy issues.

CONTENT AND STRUCTURE: This simulation involves the user in selecting an "energy bias" or basic orientation to energy issues. Then, role playing an "energy czar," the user simulates the enactment of legislation related to the chosen energy bias. The program also provides feedback in the form of the country's response to the energy czar's leadership performance. This program is a component in an integrated series, and listing and alteration of the program are allowed.

ESTIMATED STUDENT TIME REQUIRED: Evaluators indicate that a session involving this game would have a duration of between two and three hours.

POTENTIAL USES: This program is not appropriate for introducing students to relevant issues. It would more usefully serve as a tool to enable students to look at possible consequences of independently made energy decisions. The program could also be used with groups, each of which might represent a single energy bias. It was also suggested that the program could be used as an effective simulation for training in citizenship, as a means of demonstrating the importance of a single vote.

MAJOR STRENGTHS: The program introduces the concept of political bias and popular opinion in government legislation. The limited simulation situation has potential for illustrating the consequences which comes from making such decisions.

MAJOR WEAKNESSES: 1. The package is not age appropriate for its intended audience. (may be too difficult for grades 7-8), 2. The program lacks sufficient excitment and enjoyment, 3. The program has poor delivery of factual and explanatory background information.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made. (See Major Weaknesses.)

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Computer Simulated Physics Experiments

VERSION: Copyright 1980 (1981 update available)

PRODUCER: EduTech
634 Commonwealth Ave.
Newton Centre, Mass. 02159

EVALUATION COMPLETED: May 1982 by the staff and constituents of the Lehigh University Educational Technology Center and Bethlehem School District, Pennsylvania.

COST: $85.00 per disk

ABILITY LEVEL: Upper high school, post-secondary
SUBJECT: Math, physics
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: 48K Apple II Plus, disk drive, game paddles
REQUIRED SOFTWARE: DOS 3.3, Basic
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Tutorial, simulation, problem solving

DOCUMENTATION AVAILABLE: Program includes instructional objectives, program operating instructions, student instructions, and a discussion of the program's relationship to standard textbooks. Supplementary materials include the following kinds of documentation: instructional objectives, prerequisite skills or activities, sample program outputs, program operating instructions, teacher's information, resource/reference information, student instructions, student worksheets, and a discussion of the program's relation to textbooks.

INSTRUCTIONAL OBJECTIVES (Stated): 1. To demonstrate concepts of statistics (distribution, average, standard deviation). 2. To demonstrate parabolic motion with different initial conditions. 3. To demonstrate position and speed of an object with changing acceleration. 4. To demonstrate Kepler's Laws of Planetary Motion. 5. To demonstrate wave variables and the principle of superposition. 6. To demonstrate lines of force and equipotentials in an electric field.

INSTRUCTIONAL PREREQUISITES: The program states that classroom instruction is needed to introduce the students to terminology and concepts covered in the program.

CONTENT AND STRUCTURE: The package provides demonstrations in the areas of statistics, parabolic motion, planetary motion, wave motion, acceleration, and electric fields. The user determines which area to run. A graphic display is generated to simulate an experiment which demonstrates the concept with variables determined by the user. The package provides simulations that otherwise would be difficult to reproduce using actual apparatus. Six disks make up the package with each major topic on a single disk. Listing and alteration of the program is allowed.

ESTIMATED STUDENT TIME REQUIRED: Varies by program

POTENTIAL USES: The package can effectively be used to aid classroom instruction (with the instructor using the computer) or as an individualized laboratory experience (with each student using a computer). The individual programs can be used to enhance the student's understanding of concepts in the designated areas.

MAJOR STRENGTHS: 1. The use of graphics in demonstrating the results of user provided values for variables within the program 2. Well organized teacher and student manuals

MAJOR WEAKNESSES: Parts of the student manual are too difficult for many high school students. However, evaluators saw little difficulty for the college student.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
•					Instruction integrates with prior learning.
			•		Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Number Blast

VERSION: APX-10097/20097

PRODUCER: Atari, Inc
1265 Borregas Avenue
Sunnyvale, California 94086

Distributed by:

Atari Program Exchange
3281 Scott Blvd.
Santa Clara, California 95051
(800/538-1862)

EVALUATION COMPLETED: September 1982 by the staff and constituents of the Capital Children's Museum. Evaluation of this package was based partly on observation of student use.

COST: $15.95 (disk or cassette)

ABILITY LEVEL: Ages 6-16
SUBJECT: Mathematics: addition and multiplication
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Atari 800 with 24K ram, Atari 810 disk drive, 2 joystick controllers
REQUIRED SOFTWARE: Atari Basic (cartridge), Number Blast disk/cassette.
INSTRUCTIONAL PURPOSE: Remediation, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, game

DOCUMENTATION AVAILABLE: Program operating instructions are available in the supplementary materials.

INSTRUCTIONAL OBJECTIVES (Inferred): 1. To provide drill and practice in addition and multiplication, 2. To develop fine motor skills in use of joystick, 3. To develop hand-eye coordination.

INSTRUCTIONAL PREREQUISITES (Inferred): Knowledge of the operation of the computer system and knowledge of multiplication and addition tables would be prerequisites to using the package.

CONTENT AND STRUCTURE: This component teaches addition and multiplication of positive and negative numbers using a game format. Speed of making computations and skillful manipulation of the joystick enables high scores. One or two persons can play number blast. This program is a component in an integrated program series. Listing and alteration of the computer program are allowed.

ESTIMATED STUDENT TIME REQUIRED: Twenty to thirty minutes daily.

POTENTIAL USES: The package would be appropriate in situations requiring drill and practice in addition and multiplication.

MAJOR STRENGTHS: 1. The ability to add and subtract by 10 encourages students to find creative ways of reaching a number (...to get to 29; 10+10+10 and subtract 1...) 2. The program is strong as a drill and practice program.

MAJOR WEAKNESSES: 1. There is not a great difference between negative and positive reinforcement in the game. 2. Students should be given more chances on the same problem if they provide an incorrect response. 3. The menu should allow selection of an appropriate level of difficulty. 4. There should be more opportunity for collaboration and less emphasis on competition. One evaluator suggested that students might try together to answer problems within a specific time limitation. 5. The program does not provide new concepts. 6. No followup materials or suggestions are provided. 7. The exact purpose of the package is not defined.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
		●			Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
		●			Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
		●			Student creativity is effectively stimulated.
		●			Feedback is effectively employed.

SA	A	D	SD	NA	
		●			Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
		●			Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
		●			Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made (See Major Weaknesses.).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

My First Alphabet

VERSION: Atari APX-20083

PRODUCER: Atari, Inc.
60 E. Plumeria
P.O. Box 50047
San Jose, California 95050

EVALUATION COMPLETED: September 1982 by the staff and constituents of the Capital Children's Museum. Their evaluation is partly based on observation of student use of the package.

COST: $34.95

ABILITY LEVEL: Pre-kindergarten to kindergarten
SUBJECT: Alphabet and number recognition
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Atari 800 with 24K ram, Atari 810 disk drive, monitor or television
REQUIRED SOFTWARE: Atari Basic (cartridge)
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, information retrieval, game, learning management, pattern recognition

DOCUMENTATION AVAILABLE: Supplementary materials include: suggested grade/ability level(s), instructional objectives, sample program output, program operating instructions, and teacher's information

INSTRUCTIONAL OBJECTIVES (Stated): To teach the alphabet and numbers in a pleasing fashion by means of association

INSTRUCTIONAL PREREQUISITES (Inferred): The ability to manipulate the computer system, especially the keyboard

CONTENT AND STRUCTURE: "My First Alphabet" serves as a remedial reinforcement as well as a number and alphabet learning program. The package provides optional selections for the user, depending on how the program is used. Users may select prompts or answers

ESTIMATED STUDENT TIME REQUIRED: Thirty minutes to one hour per day

POTENTIAL USES: The package is appropriate for group work in the classroom or for home use. For children just beginning to use the program, a great deal of adult supervision will be needed. The program is quite noisy and could disturb children working on other projects nearby.

MAJOR STRENGTHS: 1. The graphics are excellent, 2. The sound rewards are varied, 3. The program relies on association to teach, rather than on drill, 4. The program is stimulating and enjoyable.

MAJOR WEAKNESSES: 1. A letter or number should be drawn before its picture is presented so that children have enough time to study its shape., 2. Motion of graphics and prompts across the screen should be from left to right to encourage children with Dyslexia to read in that direction, 3. If the program were used with a voice synthesizer, children would not have to depend on an adult to be sitting with them, 4. The disk is required at most times in the program, 5. Exit from the program is only possible at the end of each presentation or respond, which renders the documentation pointless.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
				•	User support materials are comprehensive.
				•	User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Euclid Geometry Tutor

VERSION: 1980 Cat. No. 26-1724

PRODUCER: Radio Shack
Education Division
400 Atrium, One Tandy Center
Fort Worth, Texas 76102

EVALUATION COMPLETED: June 22, 1982 by the staff and constituents of PREPS, Mississippi and Portland Public Schols, Multnomah ESD, Oregon

COST: $29.95

ABILITY LEVEL: Grades 9-12
SUBJECT: Geometry: geometric proofs
MEDIUM OF TRANSFER: Tape cassette or 5 1/4" flexible disk
REQUIRED HARDWARE: 16K TRS-80 Level I or Level II, or Model III
REQUIRED SOFTWARE: Basic, TRS-DOS
INSTRUCTIONAL PURPOSE: Remediation,standard instruction, enrichment and assessment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial, problem solving

DOCUMENTATION AVAILABLE: The computer program contains a post-test. Supplementary materials offer the suggested grade and ability level(s), prerequisite skills or activities, sample program output, program operating instructions, teacher's information, student's instructions, student worksheets and follow up activities.

INSTRUCTIONAL OBJECTIVES: (Inferred) Understanding of triangle labeling, criteria for proof, structure of a two column proof and the process of deductive reasoning.

CONTENT AND STRUCTURE: The user gives the computer a theorem to be proved. The computer then asks for the givens. The student has four choices: (1) automatic: the computer proves the theorem if possible; (1) practice: the student supplies the proper statements and the computer supplies the reasons; (3) quiz: the computer supplies hints (if needed); (4) test: the student proves the theorem without help from the computer. In the last three modes, the computer will verify whether the student's proof is logically correct. The computer will also state when a theorem is not provable. This package is a single program, and listing and alteration of the program is allowed.

ESTIMATED STUDENT TIME REQUIRED: Thirty minutes per session

POTENTIAL USES: The package can be used in teaching simple two column proofs of geometry theorems dealing with triangles, segments and angles of congruence. It also provides an introduction to logical thought. The program represents an innovative teaching technique and could be used with individuals for remedial work.

MAJOR STRENGTHS: The program requires carefully organized logical thought and requires precision of language.

MAJOR WEAKNESSES: The user is required to use abbreviated language for statements and reasons. The program is fairly inflexible and possibly confusing if the instructions are not carefully followed. It was noted that in spite of the program's name, it only covers a subset of geometry. Teachers using this program should be thoroughly familiar with it before using it. Reviewers warn that greater teacher familiarity is needed than is the case with other programs.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Test Bank

VERSION: 2.1

PRODUCER: Lawrence Atherton
Advance Technology Applications
4296 Tambor Court
San Diego, CA 92124

EVALUATION COMPLETED: January, 1983 by staff of NWREL and the Institute for Educational Research, Glen Ellyn, IL.

COST: $450.00

ABILITY LEVEL: Any
SUBJECT: Any
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: TRS-80 Model I or III, 32K RAM, single disk drive
REQUIRED SOFTWARE: Machine language, DOS provided with package
INSTRUCTIONAL PURPOSE: Assessment
INSTRUCTIONAL TECHNIQUES: Test construction

DOCUMENTATION AVAILABLE: The User's Manual is a 77 page notebook in a clear, easy to read format. Included are sample screen displays, a comprehensive table of contents, and a complete summary of commands. Neither an index nor a summary of error messages is provided. The material is well edited. A random sample of text tested at a readability level of eighth grade. The first section of the instruction manual provides enough information for general use, and the advanced section should be comprehensible to naive users after they have spent a few hours trying out the program. Although the material is well presented, it would be improved by taking the reader through all the operations in a normal sequence of entering some items, saving them in a disk file, assembling them into a test format, and printing the test for a small sample of ten items. Details on the method of writing the items to disk—actually making a test bank—are not given until the sixth chapter.

NOTE: The nature of this evaluation differs from that usually employed for instructional software because of the nature of this software and its use.

OVERVIEW: The Test Bank allows anyone involved in test preparation to enter, edit, and save a collection of test items in a microcomputer. The user can then select a subset of the items based upon their characteristics, edit the items again, and produce final test copy in a variety of formats. Schools, universities, licensing groups, employment offices, or any other agency involved in testing where items are used more than once would be likely to find the program quite useful.

DATA ENTRY: The program represents the melding of four separate tasks. The first is that of text entry and editing, where items are typed into the computer. Either immediately, or at any later stage, the user can modify the item through inserting or deleting material, reformatting, adding options, or changing the descriptors. This allows a continuing improvement of the items through their lifetime. In editing, the @ is used as the control character. Deletion is a two-step process where the characters to be removed are first changed to graphics and then cleared out. If the item writer wishes to emphasize an important word such as 'NOT," it can be capitalized or placed in single quotes; the capability of printers to underline or print in bold letters has not been tapped.

Included in the editing section is a provision for a 'soft hyphen,' a hyphen used to split a word at the end of a line for aesthetic reasons. If subsequent editing causes the word to be moved, the soft hyphen disappears. Insertion of a soft hyphen is accomplished by simultaneously pressing the @ key and H keys. To draw a line for fill-in-the-blank items, one must use the @ and - keys together, possibly confusing to some users.

The screen format is easy to use. The cursor location gives a clear indication whether the program is expecting a command, text entry, or some other specific information. A protected area on the screen is used to display prompts. Holding down a key results in auto repeating, and tabs are automatically placed at appropriate places for simplified item entry. The commands are almost all single key, and easy to remember.

DATA STORAGE: The second task is that of storing the data base on a disk. In a manner akin to many text editors, the Test Bank program

Continued on back

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

manipulates all the data in memory and then transfers it to disk. Therefore the size of any single file is limited to the available memory. In most cases this presents no problem as the user may assemble a test from any number of separate files, but if the items are widely scattered though these files the manual effort could become horrendous.

The disk routines are well thought out. The authors chose to write their own disk operating system rather than to use the one supplied by the hardware manufacturer. Material written to disk is verified before the program will continue. When the files are named, the program checks to be certain that another program with the same name will not be inadvertently destroyed. Separate files are produced by different sections of the master program, and they are nicely kept separate by the software. Provision has been made for merging subfiles into larger units, and for breaking bigger files into smaller ones.

Almost any type of prose item can be handled easily. Examples of essay questions, fill-in-the-blank, multiple choice, and matching formats are shown in the manual. The obvious difficulty with this or with any computerized item bank is how to include pictorial material. Pictures, diagrams, formulas with subscripts and superscripts, special symbols and the like are almost impossible to save in machine-readable format, and this software makes no provision to do so.

However, one can keep such materials in a separate file, and add tags to the items to remind oneself to place the accompanying materials into position before reproducing the final version of the test. The program allows designation of the number of line feeds to follow an item so that room can be allowed for the materials.

ITEM RETRIEVAL: The third task is that of retrieving the items from the file in preparation for printing. The simplest method is to call the items up by number, where the number is taken off the master printout of the file. Or the user can display items on the screen, and press a single key to identify an item to be selected. For large data bases the most likely method is to use the 'Hunt' command to find items with certain characteristics. Three separate six-category schemes are built into the program; e.g., items could be categorized by (A) type of item, (B) Bloom taxonomy; and (C) subject matter. Then one easily could specify matching items, level 2, in geography. Only the logical 'AND' relationship can be specified.

The use of other classification methods is possible, but requires careful thought. A few hints are provided in the manual, all of which use the answer line. The line allows one to enter information such as the specific answer, key words required in an essay or similar format answer, notes to oneself, or any alphanumeric information. If the user had each item tied to an objective, the abbreviated name of the objective or its number could be added to the answer line; e.g., (242.16a). Calling up the items by that code would then retrieve all those so identified. Unfortunately, the sort options are limited to moving items around after they are selected.

Another deficiency is the lack of any simple way of including item statistics in the item file. The manual mentions classification of items as easy, moderate, and hard, but users might prefer to include both difficulty and discrimination indexes for all item alternatives. This, along with a sort, would simplify the ordering of items from easy to hard as is commonly done.

TEST PRINTING: The final task is that of printing the test. A nice feature is that those items selected for inclusion can be edited before printing without affecting the master item bank. This could be used to advantage by any agency including some generic items which would be modified by the user for a specific situation; e.g., an arithmetic word problem with the details tied to the most recent sports event.

Headings and special instructions to the test taker are easily added. The user has some control over printer parameters, such as location of the left margin (0-15), stopping after each page, a CR/LF or just a CR, and whether to print all or just a part of the test. Unfortunately, the right margin, number of lines per page, and the character spacing are fixed and unaccessible to the user.

Continued on next page

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The test can be routed to the printer, or to disk file for storage. Therefore a user could build a test file initially, and then convert a series of tests into an item bank later—a relatively painless method of building a data base.

SUMMARY: The program is easy to use, has good documentation, and no direct competition. It appears to be very useful for organizations with a modest file of items (perhaps up to 5000) in a given grade level or other category. Experienced users might be able to duplicate some of the characteristics of the program with either a data base management system, or a text editor combined with some careful planning. However, most of the potential audience would find this program preferrable.

The evaluators indicate they would use or recommend this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Arithmetic Classroom: Fractions-Addition & Subtraction

VERSION: Copyright 1982

PRODUCER: Sterling Swift Publishing Company
7901 S. IH-35
Austin, TX 78744

EVALUATION COMPLETED: January, 1983 at the Connecticut State Area Cooperative Educational Services in New Haven, Connecticut.

COST: $49.95, replacement disks $9.95

ABILITY LEVEL: Grades 4 to 8
SUBJECT: Mathematics
TOPIC: Fractions
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II+, 48k, single disk drive
REQUIRED SOFTWARE: DOS 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUE: Tutorial, drill and practice, instructional management

DOCUMENTATION AVAILABLE: In program--sample program output, and post-test. In supplementary materials--student worksheets, and follow-up activities.

INSTRUCTIONAL OBJECTIVE: (INFERRED) Standard objectives for addition and subtraction of fractions.

INSTRUCTIONAL PREREQUISITES: Assumed but not stated.

CONTENT AND STRUCTURE: The package is part of a learning system entitled The Arithmetic Classroom which consists of eight self-contained but integrated learning packages covering the following topics: Addition, Subtraction, Multiplication, Division, Fractions — Basic Concepts, FRACTIONS — ADDITION & SUBTRACTION, Fractions — Multiplication & Division, and Decimals. Each learning package contains a lesson diskette, a practice workbook and achievement record forms which are to be used to keep track of learning progress. This package, FRACTIONS — ADDITION & SUBTRACTION, contains lessons at five levels of competence. The student is free to choose the lesson he/she wants, but should be advised that the lessons must be studied and mastered in sequence; that is, the learner should be competent at level 1 before trying level 2. The same lesson can be studied numerous times without repetition. Each lesson in FRACTIONS — ADDITION & SUBTRACTION is structured in essentially the same way: examples are given for each lesson learning objective followed by related practice exercises, and every lesson concludes with a test that is intended to determine if mastery has been achieved. The record keeping section of the program is structured for the student to keep track of his/her own progress in the strand. There is also a game package available for $29.95 which supplements this material.

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
		•			Content presentation is clear and logical.
		•			Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
•					Use of package is motivational.
				•	Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
				•	Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Arithmetic Classroom: Fractions — Addition and Subtraction

POTENTIAL USES: The package could be used for individual and small group instruction. It would be a good supplemental or remedial package as well. It is most appropriate for grades 4-8.

MAJOR STRENGTHS: The content is accurate. The student response rewards students in a highly motivating manner.

MAJOR WEAKNESSES: The program should be classified for only upper elementary grades. The format used for the tutorial is not carried over into the student exercises. In the tutorial, the fractions are added first, then the whole numbers. In the exercises, the whole number is entered first and then the fraction. According to the producer, the students are instructed to do their work on paper and then type in the answer. The order of entering the digits in the exercise is different from that shown in the tutorial to make it more convenient for the student to enter the final answer.

OTHER COMMENTS: According to the producer, the latest version of this package contains more comprehensive support materials which gives the scope and sequence of the objectives.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Arithmetic Classroom: Decimals

VERSION: Copyright 1982

PRODUCER: Sterling Swift Publishing Co.
7901 S. IH-35
Austin, TX 78744

EVALUATION COMPLETED: January, 1983 at the Connecticut State Area Cooperative Educational Services in New Haven, Connecticut.

COST: $49.95

ABILITY LEVEL: Grades 4 to 8
SUBJECT: Mathematics
TOPIC: Decimals
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II+, 48K, single disk drive
REQUIRED SOFTWARE: DOS 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUE: Tutorial, drill and practice

DOCUMENTATION AVAILABLE: In program—program operating instructions, and post-test. In supplementary materials — sample program output, program operating instructions, teacher's information, student worksheets, follow-up activities, and management system.

INSTRUCTIONAL OBJECTIVE: (INFERRED) Standard objectives for decimal concepts.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: The package is part of a learning system entitled The Arithmetic Classroom which consists of eight self-contained but integrated learning packages covering the following topics: Addition, Subtraction, Multiplication, Division, Fractions—Basic Concepts, Fractions—Addition & Subtraction, Fractions—Multiplication & Division, and DECIMALS. Each learning package contains a lesson diskette, a practice workbook and achievement record forms which are to be used to keep track of learning progress. This package, DECIMALS, contains lessons at five levels of competence. The student is free to choose the lesson he/she wants, but should be advised that the lessons must be studied and mastered in sequence; that is, the learner should be competent at level 1 before trying level 2. The same lesson can be studied numerous times without repetition. Each lesson in DECIMALS is structured in essentially the same way: examples are given for each lesson learning objective followed by related practice exercises, and every lesson concludes with a test that is intended to determine if mastery has been achieved. The record keeping section of the program is structured for the student to keep track of his/her own progress in the strand. There is also a game package available for $29.95 which supplements this material.

ESTIMATED STUDENT TIME REQUIRED: 15 minutes per day/twice a week

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
		•			Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
		•			Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
				•	Learning can be generalized.
		•			User support materials are comprehensive.
		•			User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate they would use or recommend use of this package only if certain changes were made (see Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

The Arithmetic Classroom: Decimals

POTENTIAL USES: This package is most appropriately used with individuals and small groups, and as reinforcement after formal instruction.

MAJOR STRENGTHS: The content is accurate. The tutorial process is educationally sound.

MAJOR WEAKNESSES: Numbers could be made larger so that a group of students could view the material easily to make better use of the total screen.

OTHER COMMENTS: According to the producer, the latest version of this package contains more comprehensive support materials which gives the scope and sequence of the objectives.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Metric Drill

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $49.95

ABILITY LEVEL: Grades 4 through 8
SUBJECT: Mathematics
TOPIC: Metric System
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — pre-test, post-test, and student's instructions. In supplementary materials — prerequisite skills or activities, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide drill and practice on metric units for measuring length, volume and mass; metric prefixes; conversion between metric units; and estimating metric measures. Objectives are stated more precisely in the manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The package is organized in a series or lessons. Successful completion of one lesson is the prerequisite for the next. By pre-testing the teacher can determine placement.

CONTENT AND STRUCTURE: This package provides drill and practice material for three levels of skill using the metric system — beginning, intermediate and advanced — in length, mass and capacity units. The teacher can create his/her own lessons to fit the needs of the student. Student record keeping is also provided.

POTENTIAL USES: This package is most appropriate for use with individual students.

MAJOR STRENGTHS: The skill levels in the program build from simple knowledge to more complex applications of knowledge. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The program moves ahead too quickly with insufficient review. Some improvement is needed, especially at the lower levels, on the concept of the differences

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●	●			Use of package is motivational.
		●			Student creativity is effectively stimulated.
	●	●			Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●	●			Instruction integrates with prior learning.
	●				Learning can be generalized.
		●			User support materials are comprehensive.
		●			User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate they would use or recommend use of this package only if certain changes were made (see Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Metric Drill

between metric measurements. Some visual comparisons would be helpful. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

OTHER COMMENTS: According to the producer, this package is undergoing extensive revisions. The new version will have the following added features: 1. lessons presented in linear interactive instructional form followed by an optional randomly presented practice lesson; 2. feedback in terms of hints and explanations of incorrect answers; 3. teacher options including number of times a student must answer before the correct answer is shown, branching to the end of the lesson on too easy or too difficult lessons, and repetition of missed items; 4. pre/post tests for placement and testing progress; and 5. some additional graphics.

Math Concepts

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District in Milwaukie, Oregon and the Northwest Regional Educational Laboratory in Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Grades 2 to 6
SUBJECT: Mathematics
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, and tutorial

DOCUMENTATION AVAILABLE: in program — pre-test, post-test, and student's instructions. In supplementary materials — instructional objectives, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide drill and practice on the concepts of ordering decimal and whole numbers, identifying odd and even numbers, place value, rounding, identifying prime numbers, the meaning of multiplication, and counting by 2's, 5's and 10's. Objectives are stated more precisely in manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) This package is organized in a series of lessons. Therefore, successful completion of one lesson is the prerequisite for the next. By pre-testing the teacher can determine placement.

CONTENT AND STRUCTURE: This package provides drill and practice on the math concepts described in the objectives. The student either fills in a direct answer to a question, or is given a choice of a, b, or c. The teacher can create lessons with as many items as needed, each having a 4-line stimulus and up to 4 correct responses, giving flexibility of student response. The student planning file keeps records of incorrect responses. A printout of this file is available.

POTENTIAL USES: This package is most appropriately use with individual students.

MAJOR STRENGTHS: The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
				●	Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●	●			Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate that they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Math Concepts

keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The directions are not always explicit. Abbreviations may be used inappropriately — "R. to nearest . . ." for round. Young students may not grasp what directions mean. There is a spelling error in program CI6 — "nearest." The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

OTHER COMMENTS: According to the producer, this package is undergoing extensive revisions. The new version will include the following features: 1. additional graphics in the presentations; 2. capability for the teacher to set response requirements, i.e., branch to the end of the lesson if work is too easy or too difficult; and 3. modification of the more difficult of the instructional sequences based on test information with Chapter 1 children.

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Easy Grader

VERSION: Rev. 1.1

PRODUCER: ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

EVALUATION COMPLETED: February 1983 by the staff of Northwest Regional Educational Laboratory.

(NOTE: The format of this report differs from that used by MicroSIFT for instructional software, and is designed specifically for recordkeeping software.)

COST: $22.95

MEDIUM OF TRANSFER: 5-1/4" flexible disk

REQUIRED HARDWARE: ATARI 800 computer with 40k of RAM memory, Monitor, 1 or 2 ATARI 810 disk drives, ATARI BASIC language cartridge. Optional equipment—ATARI or equivalent printer, ATARI 850 interface module.

REQUIRED SOFTWARE: DOS-2

PURPOSE: To store grades, computer averages, analyze grades, and print grade reports.

INTENDED AUDIENCE: Classroom teachers

SYSTEM CAPACITY: One class record could be as much as 100 grade entries for 35 students with names as long as 25 characters, and assignment names as long as 20 characters. The documentation does not state how many such classes will fit on one data disk. However, the system does allow you to use as many data disks as you like.

DOCUMENTATION AVAILABLE: The package includes one operator's manual which includes a table of contents, a system overview, operating instructions, illustrations of screen displays, sample reports, and a description of system and individual file capacities.

REPORTS GENERATED: The system will generate the following reports provided the printer option is available to the system: individual student report, final class statistics (grade frequency distribution), class grade report, class name list, and class average report.

MAJOR STRENGTHS: This package takes the tedium out of grading. It also allows for manual grading methods (absolute percent, point system, grading on the curve, grading on the curve using the standard deviation). Records can be retrieved in class list order (alphabetical), by student name, or by any of the first characters in the student name.

MAJOR WEAKNESSES: Documentation is poorly organized and should have an index. In certain cases the error trapping is poor. Once a grading method is chosen, it cannot be changed.

OTHER COMMENTS: Since the evaluation began, Easy Grader has been revised by the author. Anyone who purchasd Rev. 1.1 can obtain a free upgrade to Rev. 1.2 by phoning the Atari Exchange Order Department (800/538-1862).

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

For the following sections this key applies: SA—Strongly Agree, A—Agree, D—Disagree, SD—Strongly Disagree, Y—Yes or True, N—No or False.

DOCUMENTATION:

D Documentation provides necessary assistance to make the program easy to use.
SA Capacity of the system is suitable.
A Terminology and format are consistent.
A Documentation is written in clear, straightforward language.
D Documentation is well organized.

INPUTS/OPERATION

N Allowable input field sizes are delineated.
Y There is an editing option prior to or in conjunction with entry of each set of data.
Y The package is menu driven.
N Records are retrievable by record number.
Y Records are retrievable by name.
Y The number of records in use can be displayed.
N A message appears when the file capacity is approached.
Y The capacity to copy data files appears on an appropriate menu or in the program documentation.
N Optional and/or user-defined data fields are available.

D The package permits only acceptable data to be entered.
D The package provides for easy or automatic restart and recovery.
A Data entry procedures are consistent from module to module.
D The various displays provide adequate instructions and prompts to the user concerning how to enter data.
D The package adequately advises the user when the program is functioning incorrectly.
A Data fields are designed to accomodate the sizes and formats of data in common use in school.
SA The capacity of the system and individual files are suitable for intended applications.
D The program runs at an adequate speed.

OUTPUTS

A The program provides outputs which are appropriate for the purpose of the program.
SA The package provides suitable options for screen display of hard copy outputs, and vice versa.
SA The package provides for screen and hard copy outputs.
A Reports are easy to read and use, with meaningful abbreviations, adequate spacing and legible print.
A Screen displays are easy to read and use.

OVERALL

SA The package is easy to install and use.
A The package provides a real advantage over manual methods.
A The program is flexible in being able to be adjusted to local needs.
A The program is reliable.
A The package does the task it purports to do.
D The software provides for protection against casual access to confidential data.

Basic English Skills

PRODUCER: Encyclopedia Britannica Education Corporation
10th Floor
425 N. Michigan Avenue
Chicago, IL 60614

EVALUATION COMPLETED: March 1982 by the staff and constituents of TIES, St. Paul, Minnesota

COST: $373.00 per set

ABILITY LEVEL: Grades 6-12
SUBJECT: English grammar: parts of speech
MEDIUM OF TRANSFER: 5-1/14" flexible disk
REQUIRED HARDWARE: 48k Apple II with one disk drive and a monitor or television (preferably color).
REQUIRED SOFTWARE: DOS 3.3
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, tutorial

DOCUMENTATION AVAILABLE: The computer program includes prerequisite skills and activities, program operating instructions, pretests and student instructions. The supplementary materials include the suggested grade and ability level(s) and instructional objectives.

INSTRUCTIONAL OBJECTIVES: Correctly identify and pluralize proper, common and collective nouns; correctly identify and use nominative and objective case pronouns, correctly use "who" and "whom;" identify verbs, verb tense, verb phrases, auxiliary verbs, "being" verbs, action and linking verbs, use irregular verbs, use past and past participle forms of irregular verbs; identify adverbs, distinguish between adjectives and adverbs; identify adjective degrees and descriptive, demonstrative and possessive adjectives, distinguish between the use of "a" and "an;" identify coordinating, subordinating and correlative conjunctions and determine correct usage; use prepositions correctly within a paragraph.

INSTRUCTIONAL PREREQUISITES: Sixth grade reading level

CONTENT AND STRUCTURE: The package contains eight diskettes covering the traditional parts of speech. There is one diskette for each part of speech with the exception of "verbs," for which there are three diskettes, and two, "conjunctions" and "prepositions", share a diskette. There are from two to five lessons on each diskette. Most begin with a short tutorial plus four or five questions with highly detailed feedback. The second part of each lesson usually consists of a short drill with eight to ten questions. There is a forced criterion level on the tutorial sections, requiring the student to answer with 90-100% accuracy before being allowed to go on to the drill section. On most of the diskettes there is one lesson involving the identification of a part of speech and at least one lesson in which the student must make decisions about correct usage. In most of these tasks the

Continued on back

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
			•		User support materials are comprehensive.
			•		User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package only if certain changes were made.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Basic English Skills, continued

student is working with single sentences. In the "Prepositions" and "Verbs 2" exercises the student identifies the parts of speech in a paragraph context. (Note: evaluators suggest that the diskettes be used in order because the grammatical terminology builds.)

ESTIMATED STUDENT TIME REQUIRED: Total time for all diskettes is 12 hours and 40 minutes. The time estimates provided by the manufacturer appear to be accurate for remedial users and will be low when used for enrichment.

POTENTIAL USES: Remedial grammar instruction for high school level, for mainstream students at the junior high level or for enrichment at the middle school level. Because the material contains both tutorial and drill activities it would be apropriate both as standard classroom instruction and as a supplement. Because the on-line instructions are clever and because the program is relatively free of bugs, it could be used in lab settings where a student is not under immediate supervision. The courseware contains no management system and is not appropriate where student records are required.

MAJOR STRENGTHS: 1) The content of the package is clearly written and well organized. The grammar terminology is used carefully with new terms being introduced only after having been carefully explained. 2) The screen formatting was extremely well done. Borders are used to separate directions from exercises. The screens were never cluttered and presentation delays effectively focus the user's attention on the relevant section of the screen. 3) The feedback used in the tutorial sections was detailed and highly informative. Color coding was used as an additional source of feedback. 4) The input routines were well constructed, so that erroneous input was erased and the cursor relocated. When input was in whole words, simple spelling errors were checked for and not counted against the student. 5) The instructional content was accurate and appeared to be at an appropriate reading level for high school students. 6) The program uses an upper and lower case character set and with the shift key adaptor, upper and lower case letters can be input. This is particularly useful in the section on common and proper nouns.

MAJOR WEAKNESSES: The documentation was added after the package was originally reviewed. The lack of documentation was originally listed as a major weakness. The documentation included in the package now, while very helpful, would be much stronger if sample screens were given for lessons. Without running each diskette, teachers will have difficulty envisioning how lessons are structured and presented. In addition, inconsistency in the use of directions on different disks was noted.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Antonyms/Synonyms

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Grades 3 through 8
SUBJECT: Language Arts
TOPIC: Word Usage
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade ability level(s), instructional objectives, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To identify antonyms and synonyms of words. The objectives are stated more precisely in the manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student should have some prior instruction on the meaning of antonym and synonym. The package provides a student planning option which allows the teacher to assess the student's progress.

CONTENT AND STRUCTURE: Lessons were developed to help students expand vocabulary by becoming familiar with synonyms and antonyms. The student is given a sentence and is asked to select a synonym or antonym from four given answers. Other options include the ability to create your own lessons and a student planning feature where the computer keeps a file of the incorrect responses made by each student.

POTENTIAL USES: This package is most appropriately used with individual students for standard instruction and enrichment.

MAJOR STRENGTHS: The package gives students a chance to see there is more than one way to say something. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The rewards are not particularly exciting, and would seem not to be a motivator in themselves. The program states it builds vocabulary, but more likely it is building on knowns. In S48 the question is asked of the student—"Do you want to add spark to your communication?". If the student inputs "No" the response is "good going"!? However, the authoring capability of the package would allow the teacher to modify such a question, or any other question in the prewritten lessons.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●	●			Package achieves defined purpose.
	●				Content presentation is clear and logical.
			●		Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●	●			Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Consonants/Blends

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $79.95

ABILITY LEVEL: Grades 1 through 3
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, Cassette Control Device (CCD), cassette recorder/player, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2, cassette tapes
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — instructional objectives, sample program output, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) Given the auditory stimulus, the student will type the: initial, final and medial consonants; initial, medial and final blends of L, R, S, Q, T; and initial and final diagraphs. The student will understand silent letters, hard and soft sounds of consonants, and sounds formed by combinations of consonants. Other objectives are stated in the manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) Familiarity with the keyboard.

CONTENT AND STRUCTURE: A series of phonics lessons on sounds of consonants and consonant blends is presented on this disk. Initial and final consonants are included along with initial, final and medial blends. The teacher records the instructions and directions on tape with the use of the CCD. The teacher makes tapes to fit lessons from a supplied word list. The teacher can also create a lesson other than the given lists. Student record keeping is provided with an option for a print out.

POTENTIAL USES: This package is most appropriately used with individual students for standard instruction or remediation.

MAJOR STRENGTHS: The package covers a wide variety of material on consonants and blends. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The package includes many instructions which could be confusing and frustrating for young students. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
				●	Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Create Fill-In-The-Blanks

VERSION: 1981

PRODUCER:
Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January, 1983 at the Clackamas County EDS, Milwaukie, Oregon.

COST: $26.95

ABILITY LEVEL: Grades K-6
SUBJECT: Any language curriculum area
TOPIC:
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, cassette control device, cassette player/recorder, printer (optional)
REQUIRED SOFTWARE: Cassette tapes. Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUE: Authoring, drill and practice

DOCUMENTATION AVAILABLE: In program—student's instructions. In supplementary materials—sample program output, program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVE: Not stated because this is a program which allows teacher to enter material.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: The teacher is able to create lessons, using the tape player, which requires one word or part of a word as a response. Especially recommended for giving students practice on recognizing sounds. Lessons are easy to prepare—following the step by step instructions on the computer screen. Programs keep track of individual errors. Up to 100 students can be saved on the disk. Each disk will also hold 50 different files (lessons) of up to 20 presentations per file.

POTENTIAL USES: Program allows teacher to enter stimulus word for any curriculum area. The package has no built-in content. This package is most appropriate for use with individual students.

MAJOR STRENGTHS: This package has the flexibility to be adapted to any subject area. It allows for one or two letters to be input making it very good for young children. The unique use of the Cassette Control Device (CCD) is a positive aspect of some of the authoring programs as it gives students both visual and auditory clues. The only limitation is the amount of time the computer allows to get something recorded on tape. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: There are lots of instructions to get started for young students. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

EVALUATION SUMMARY

SA	A	D	SD	NA	
				●	Content is accurate.
				●	Content has educational value.
				●	Content is free of stereotypes.
				●	Purpose of package is well defined.
				●	Package achieves defined purpose.
				●	Content presentation is clear and logical.
				●	Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
				●	Use of package is motivational.
				●	Student creativity is effectively stimulated.
				●	Feedback is effectively employed.

SA	A	D	SD	NA	
				●	Learner controls rate and sequence.
				●	Instruction integrates with prior learning.
				●	Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Create Skills — Elementary/Intermediate

VERSION: 1981

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January, 1983 at the Clackamas County ESD, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $26.95

ABILITY LEVEL: Elementary, grades 1-6; Intermediate, grades 4-8
SUBJECT: Language (any subject except math)
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUE: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program—student's instructions. In supplementary materials—program operating instructions, teacher's information.

INSTRUCTIONAL OBJECTIVE: Teacher creates lessons, so would also create objectives.

CONTENT AND STRUCTURE: This package comes in two versions, elementary or intermediate each for the price listed above.

The elementary version allows 4 lines of stimulus and acceptable response. It also has several special graphics symbols available.

The intermediate version allows 9 lines of text, 6 lines of stimulus, and can specify up to 4 acceptable responses.

Both versions keep a file of the students' incorrect resonses for the purpose of planning future lessons. A printout of this file is available. The program will store 40+ students per disk.

POTENTIAL USES: Teacher can create a lesson to fit any curriculum area by following directions. Lessons provide drill and practice or tutorial modes.

MAJOR STRENGTHS: The capability for the teacher to author appropriate materials for students allows flexibility to adapt to his/her own curriculum. By following directions in the program and reading the documentation carefully, the process is very easy. In allowing multiple acceptable responses to the stimulus, the teacher is able to allow for variable responses where appropriate. The record keeping for students is a strong point in that it not only tells how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

OTHER COMMENTS: Be sure to read formatting!

EVALUATION SUMMARY

SA	A	D	SD	NA	
				•	Content is accurate.
				•	Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
				•	Content presentation is clear and logical.
				•	Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Create Spell-It

VERSION: 1981

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January, 1983 at the Clackamas County ESD, Milwaukie, Oregon.

COST: $26.95

ABILITY LEVEL: Pre-school through grade 10
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4" flexible disk, protected
REQUIRED HARDWARE: Apple, 48K, 1 disk drive, monitor, cassette control device, cassette player/recorder, printer (optional)
REQUIRED SOFTWARE: Cassette tapes, Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUE: Instructional management, authoring, drill and practice

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — sample program output, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVE: Creating lessons is done by teacher—objectives would vary from teacher to teacher.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: Teacher records auditory stimulus which can require one word or a phrase to an answer. Student planning/recordkeeping is included. Teacher creates all lessons.

POTENTIAL USES: There is no curriculum content with this package. It is a program which allows a teacher to author his/her own word list, so it would be useful in any curriculum area. The teacher first creates a word list using a tape recorder with a controller device from the computer, the teacher then pronounces each word in the list, and uses it in a sentence if desired. Students using the program type the word into the computer which they hear from the tape recorder.

MAJOR STRENGTHS: The unique use of the cassette control device (CCD) is a positive aspect of this package and gives students both visual and auditory clues. The only limitation is the amount of time the computer allows to get something recorded on tape. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The program does not allow for capital letters in responses, so the student could not use proper nouns. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

EVALUATION SUMMARY

SA	A	D	SD	NA	
				●	Content is accurate.
				●	Content has educational value.
				●	Content is free of stereotypes.
				●	Purpose of package is well defined.
				●	Package achieves defined purpose.
				●	Content presentation is clear and logical.
				●	Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
				●	Use of package is motivational.
				●	Student creativity is effectively stimulated.
				●	Feedback is effectively employed.

SA	A	D	SD	NA	
				●	Learner controls rate and sequence.
				●	Instruction integrates with prior learning.
				●	Learning can be generalized.
	●				User support materials are comprehensive.
				●	User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Keyboard Organ

VERSION: APX 10094/20094

PRODUCER: Atari Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

EVALUATION COMPLETED: January, 1983 by the Capital Children's Museum in Washington, D.C.

COST: $22.95

ABILITY LEVEL: 4th grade and up
SUBJECT: Music
TOPIC: Music keyboards
MEDIUM OF TRANSFER: 5" flexible disk
REQUIRED HARDWARE: Atari 800 or 400 system, Atari 810 or 410, 24K RAM
REQUIRED SOFTWARE: Program diskette
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Game, simulation

DOCUMENTATION AVAILABLE: In supplementary materials--program operating instructions

INSTRUCTIONAL OBJECTIVES: (INFERRED) To allow the operator to use the Atari computer to play music.

INSTRUCTIONAL PREREQUISITES: (INFERRED) An understanding of the piano keyboard.

CONTENT AND STRUCTURE: The program simulates the keyboard organ using one key for each note or chord. Features are: vibrato (on/off), soft/hard attack, record and playback songs, store recorded songs on diskette.

POTENTIAL USES: The software requires supervision in order to understand and implement. Since the supplementary materials are ineffective and the program does not provide user assistance, this program is not recommended for use without supervision.

MAJOR STRENGTHS: User can adjust the tempo.

MAJOR WEAKNESSES: The package teaches nothing about note value. The operating instructions are cumbersome and wordy. The graphics on keyboard are ineffective. The letters for notes and for keyboard cause confusion to the user who is familiar with music theory.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
●					Content is free of stereotypes.
		●			Purpose of package is well defined.
				●	Package achieves defined purpose.
			●		Content presentation is clear and logical.
				●	Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
		●			Use of package is motivational.
	●				Student creativity is effectively stimulated.
●					Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
		●			Instruction integrates with prior learning.
			●		Learning can be generalized.
			●		User support materials are comprehensive.
			●		User support materials are effective.
		●			Information displays are effective.
			●		Users can operate easily and independently.
		●			Teachers can employ package easily.
			●		Computer capabilities are used appropriately.
				●	Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would not use or recommend use of this package (see Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Lemonade

VERSION: APX 10001 and 20001

PRODUCER: Atari Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

EVALUATION COMPLETED: January, 1983 at the Capital Children's Museum in Washington, D.C.

COST: Unknown

ABILITY LEVEL: 4th grade and up
SUBJECT: Math
TOPIC: Economics
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Atari 800 Computer and Monitor, Atari 810 disk drive, or, Atari 410 Cassette
REQUIRED SOFTWARE: Atari BASIC cartridge
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUE: Game, simulation, problem solving

DOCUMENTATION AVAILABLE: In the program--sample program output, and student's instructions. In the supplementary materials--suggested grade/ability level(s), instructional objectives, prerequisite skills or activities, sample program output, teacher's information, resource/reference information, student worksheets, follow-up activities.

INSTRUCTIONAL OBJECTIVES: (STATED)
Introduce student to a free market economy; introduce student to running a small business; simulates facing random unexpected events of real life; practice in arithmetic; build basic economic vocabulary; learning to make practical business decisions.

INSTRUCTIONAL PREREQUISITES: (INFERRED)
Introduction of related and provided vocabulary; introduction of concepts of the economy (supply and demand); introduction of the concept of outside variables vs. business controlled variables.

CONTENT AND STRUCTURE: The package is a lemonade stand simulation with user controlled variables: production costs, advertising costs, and sales costs. Unexpected events (not user controlled), include weather conditions, market conditions (demand factors), and supply fluctuations. The structure is a game format which is a means to reach the target audience. The object of the game is to acquire the greatest assets. Assets are tabulated per day (run of game) and accumulated over time.

ESTIMATED STUDENT TIME REQUIRED: 30 min.

POTENTIAL USES: Lemonade could be used to augment economic instruction; for interactive "word problem" solving; to help students in making intelligent decisions in a free market economy; and to develop a sense of entrepreneurial skills. Lemonade can be used with individuals, small groups or large groups (using a large monitor).

MAJOR STRENGTHS: Instant visibility of results; limited variables (i.e., results are clearly understood); good graphic and sound effects of "events"; effective with more than one user; easy manipulation and operation of program.

MAJOR WEAKNESSES: Program doesn't show comparative daily profit; graphics could have been augmented for a more enjoyable simulation; sound for insufficient assets could be improved.

EVALUATION SUMMARY

SA	A	D	SD	NA	
●					Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
●					Purpose of package is well defined.
●					Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
	●				Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
	●				Student creativity is effectively stimulated.
●					Feedback is effectively employed.

SA	A	D	SD	NA	
●					Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
		●			User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
		●			Computer capabilities are used appropriately.
●					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Letter Recognition

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $26.95

ABILITY LEVEL: Preschool through grade 1
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Instructional management, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED)
Given a letter (upper or lower case) on the screen, the student will match it with the letter on the keyboard. Given a number written in words, the student will type the numeral. Objectives are stated more precisely in the manual.

INSTRUCTIONAL PREREQUISITES: (STATED)
The students need to know the difference on the keyboard between the letter 'O' and the digit '0', and the letter 'I' and the digit '1'.

CONTENT AND STRUCTURE: The student is presented with capital letters, lower case letters or digits 1-9 and must match them by pressing the corresponding letter or digit from the keyboard. Other options give the word name of a number and the student is to type the numeral. Incorrect responses cause no change in the display, but error is stored in student planning file. This file is displayed at the end of the exercise, or may be displayed later on the screen or on the printer.

POTENTIAL USES: This package is most appropriate for use with individual students.

MAJOR STRENGTHS: This package is good drill and practice for the age group and is a good way to get young students familiar with the keyboard. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The graphics are repetitive and would get tiresome quickly. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
		●			Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Magic Spells

VERSION: Copyright 1981

PRODUCER: Advanced Learning Technology, Inc.
4370 Alpine Road
Portola Valley, CA 94025

EVALUATION COMPLETED: January, 1983 by the Oakland ISD, Pontiac, Michigan.

COST: $45.00

ABILITY LEVEL: Grades 1 to 8
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, single disk, color monitor recommended
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment
INSTRUCTIONAL TECHNIQUES: Drill and practice, authoring

DOCUMENTATION AVAILABLE: In the program—program operating instructions and student's instructions. In the supplementary materials—suggested grade/ability level(s), instructional objectives, sample program output, teacher's information, and student's instructions.

INSTRUCTIONAL OBJECTIVES: (STATED) To increase the users skills in spelling.

INSTRUCTIONAL PREREQUISITES: None

CONTENT AND STRUCTURE: Adventure combined with spelling drill and practice with clear directions for use.

ESTIMATED STUDENT TIME REQUIRED: 20 minute sessions

POTENTIAL USES: Introduce disk to whole class to explain how it operates. Make up student assignment sheets including title of list, place for student name, and the date, the list of words and a place to enter the student's progress report. Student would be given assignment sheet and sent to media center to use program. Upon completion of program, student would return assignment sheet to teacher for evaluation and follow up. This would be an excellent program for correlating vocabulary from other subject areas. Program provides an excellent means for classroom teacher to enter his or her own list of spelling or other words in which review of spelling is needed. Students find the format very motivational. It is very easy to enter a list of words.

MAJOR STRENGTHS: The program is simple to use, especially entering a list of the teacher's choosing. The program is appealing to students. It has many possibilties for use in all subject areas. Input of the teacher's own words into program is allowed, making the program very relevant. It is very easy to enter a list of words. Appropriate clues are available to assist students having difficulty. The letters are large and easy to read. A review of the word list is provided before the activity begins.

MAJOR WEAKNESSES: None cited.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
•					Purpose of package is well defined.
•					Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
•					Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
•					Information displays are effective.
	•				Users can operate easily and independently.
•					Teachers can employ package easily.
•					Computer capabilities are used appropriately.
•					Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Math Strategy

PRODUCER: Behaviorial Engineering
230 Mt. Hermon Road, Suite 207
Scotts Valley, CA 95066

EVALUATION COMPLETED: January, 1983 at the Oakland ISD, Pontiac, Michigan.

COST: $45.00

ABILITY LEVEL: Grades 2 to 8
SUBJECT: Mathematics
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, single disk drive
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction, enrichment, remediation
INSTRUCTIONAL TECHNIQUE: Drill and practice

DOCUMENTATION AVAILABLE: In program—sample program output; student's instructions. In supplementary materials—sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions.

INSTRUCTIONAL OBJECTIVE: (INFERRED) Recall of basic math facts (e.g., 6 X 7 = 42)

INSTRUCTIONAL PREREQUISITES: None

CONTENT AND STRUCTURE: This is a drill and practice program on the basic math facts. The program employs sound and color graphics along with a special "minds' eye" technique to help recall the learned tables.

ESTIMATED STUDENT TIME REQUIRED: 5-10 minutes on a daily basis to achieve the objectives and maintain new skills developed through program use.

POTENTIAL USES: Large group—discussion and instruction. Small group/individual—tutorial and practice. This program would be helpful to elementary students with perceptual problems. Use with individual students in learning to recall basic math facts from memory.

MAJOR STRENGTHS: Allows teacher input of items. Perhaps students with perceptual problems would benefit from it. Students liked the sound, blinking eye and other positive comments.

MAJOR WEAKNESSES: The evaluators indicated they would not use this program with average fourth graders. The relationship between so-called neuro-linguistic programming and drilling the recall of basic facts is inconclusive. The program had a few glitches—would not accept 144 typed backwards. Students would lose interest in the program after a few problems. A wider variety of problems is needed—too many 5+5, 1+1, 2+2 types. This becomes a drill and practice in mathematics, but it set out to be more. The evaluators are not sure if this computer program is the best way to teach children how to visualize using their "minds eye", because the required action can be predicted ("type the equation" and "type the equation backwards").

OTHER COMMENTS: The producer indicates that the package is intended to teach a new method of learning (neurolinguistic programming) rather than strictly content area material.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
•					Content is free of stereotypes.
	•				Purpose of package is well defined.
		•			Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
		•			Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would not use or recommend use of this package (see Major Weaknesses).

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Nouns/Pronouns

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $32.95

ABILITY LEVEL: Grades 3 through 6
SUBJECT: Language
TOPIC: Parts of Speech
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide drill and practice on recognition of common and proper nouns, possessives; nouns and pronouns; noun plurals; and identification of pronouns and antecedents. The objectives are more precisely stated in the manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student should have some prior instruction to the objectives. A student planning option is available to assess the student's progress.

CONTENT AND STRUCTURE: The package covers identification of nouns, plural nouns, possessives, identification and use of pronouns and pronoun antecedents. The student is presented with a stimulus and inputs a choice of a, b, or c, or a word. The package includes a record keeping option with printing capability. Also included is a create-a-lesson format.

POTENTIAL USES: This package is most appropriately used with individual students for remedial, standard instruction or enrichment.

MAJOR STRENGTHS: The presentation of the material is very logical. The program allows for alternate ways of answering the questions and gives immediate feedback. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. Modifications to any existing lesson can also be made. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The rewards are not particularly exciting, and would seem not to be a motivator in themselves. In places, the screen is somewhat crowded due to the larger lettering.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●	●			Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Roots/Affixes

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Grades 3 through 8
SUBJECT: Language Arts
TOPIC: Word structure
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide drill and practice in identifying root words, prefixes and suffixes. To develop an understanding of the meaning of common prefixes and suffixes and how that meaning relates to the root word. The objectives are stated more precisely in the manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student should have some prior instruction to the objectives before using the package. A student planning option is available to assess the student's progress.

CONTENT AND STRUCTURE: This package provides material for grades 3 through 8 on root words, prefixes, suffixes, identifying word parts and using prefixes in context. It allow the teacher to create his/her own lessons within the given parameters for responses. Other options include student planning and student progress record keeping.

POTENTIAL USES: This package is most appropriate for use with individual students for remediation, and standard instruction .

MAJOR STRENGTHS: The package has a good logical presentation that works from easy to more difficult levels. The screen displays use large, easy to read letters. The student is given immediate feedback responses. The program accepts either letter a, b, or c responses of the complete word typed in. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The rewards are not particulary exciting, and would seem not to be a motivator in themselves. If a student used this program through grade 8 it could get repetitious.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●	●			Use of package is motivational
				●	Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicated they would use or recommend use of this program with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Speed Reader

VERSION: Copyright 1981

PRODUCER: Davidson and Associates
6069 Groveoak Place #12
Rancho Palos Verdes, CA 90274

EVALUATION COMPLETED: January, 1983 by the Oakland ISD of Pontiac, Michigan.

COST: $70.00

ABILITY LEVEL: Secondary
SUBJECT: Reading
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, single disk drive
REQUIRED SOFTWARE: DOS 3.3, Applesoft
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUE: Drill and practice

INSTRUCTIONAL OBJECTIVE: (INFERRED)
To increase reading speed.

INSTRUCTIONAL PREREQUISITES: None.

CONTENT AND STRUCTURE: Using program and data diskettes, the user is given various exercises designed to improve reading speed. Documentation summarizes disk program content for each exercise and prescribes passage through package.

ESTIMATED STUDENT TIME REQUIRED: 30 minutes, twice a week.

POTENTIAL USES: Using this package in the classroom is difficult since it requires a quiet atmosphere for concentration. However, it covers valuable reading skills (rate and efficiency) which are more easily taught via the computer than via the former tachistoscope. Speed reading is most appropriate for individual or small group usage, which makes it excellent for secondary students in a reading/study skills lab. The program can be used by average or above-average secondary students who wish to independently improve their reading rate and comprehension. With more teacher involvement and direction, remedial students could benefit from some of the drill exercises.

MAJOR STRENGTHS: Once the learner understands the purpose and operation of the program, he/she can run it easily himself each time—no more teacher guidance would be needed to advance with the program. This program forces the learner to "keep up" better than a print speed reading program can. In other words, the learner cannot "cheat". The practices are to be limited to one per day (maximum time of 30 minutes) and as few as two sessions per week. Thus, boredom or "burn-out" probably will not occur. The package has good manual and user documentation. Its content is accurate and feedback on the student's progress is accurate and immediate. Exam units are included.

MAJOR WEAKNESSES: The text selections are not motivational or plentiful. They are void of explanations and activities for adjusting speed/method of reading for specific content.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
		•			Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Spelling Strategy

VERSION: Copyright 1981

PRODUCER: Behavioral Engineering
230 Mt. Hermon Road, Suite 207
Scotts Valley, CA 95066

EVALUATION COMPLETED: January, 1983 at the Oakland ISD in Pontiac, Michigan.

COST: $45.00

ABILITY LEVEL: Grades 2 to 8
SUBJECT: Language Arts
TOPIC: Spelling
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, single drive, color monitor recommended
REQUIRED SOFTWARE: Applesoft, DOS 3.3
INSTRUCTIONAL PURPOSE: Standard instruction
INSTRUCTIONAL TECHNIQUES: Remediation, drill and practice, tutorial, authoring

DOCUMENTATION AVAILABLE: In program -- sample program output, student's instructions. In supplementary materials -- sample program output, program operating instructions, teacher's information, resource/reference information, student's instructions.

INSTRUCTIONAL OBJECTIVES: (INFERRED) To increase the users spelling skills.

INSTRUCTIONAL PREREQUISITES: None

CONTENT AND STRUCTURE: This package is a spelling drill and practice that employs sound, color graphics and a special "mind's eye" technique to help recall words.

POTENTIAL USES: Supplement for individuals or pairs of students. Good for anyone with spelling difficulties. Especially good in reading lab or special education class. Easy entry of weekly spelling lists. Menu option of adding individual word lists with sentence practice.

MAJOR STRENGTHS: Presents spelling words in unusual and attractive format. Students intrigued by need to visualize words forwards and backwards. Hi-res displays change very quickly--much faster than many other programs. Good techniques for spelling words. Good reinforcement with several program options.

MAJOR WEAKNESSES: Learner must make many choices before program starts. Student must indicate: A) name, B) favorite color, C) upper or lower case, D) right or lefthanded, E) sound or no sound, F) choose word list from menu, G) choose from menu of five options. Program would be better if some choices could be preset by teacher and retained on disk (choices C, E, F and G).

Program may be too long for regular classroom use. No choice on which program to use for reinforcement. The user must go through all of them, which makes program lengthy.

OTHER COMMENTS: The producer indicates that the package is intended to teach a new method of learning (neurolinguistic programming) rather than strictly content area material.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
•					Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
•					Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
•					Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
•					Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
•					Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicate they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Verbs

VERSION: 3.3

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January 1983 at the North Clackamas School District, Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $32.95

ABILITY LEVEL: Grades 2 through 5
SUBJECT: Language Arts
TOPIC: Grammar
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, enrichment, assessment
INSTRUCTIONAL TECHNIQUES: Instructional management, authoring, drill and practice, tutorial

DOCUMENTATION AVAILABLE: In program — student's instructions. In supplementary materials — suggested grade/ability level(s), instructional objectives, program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVES: (STATED) To provide drill and practice in recognizing and identifying verbs; identifying the tense of regular and irregular verbs; understanding subject and predicate correspondence; contractions; and correct verb usage. The objectives are stated more precisely in the manual.

INSTRUCTIONAL PREREQUISITES: (INFERRED) The student should have some prior instruction on the objectives. A student planning option is available to assess the student's progress.

CONTENT AND STRUCTURE: This package contains a multi-level program on verbs. The package includes: 1. recognition and identification of verbs, 2. tense of regular and irregular verbs, 3. subject - predicate correspondence, 4. contractions, and 5. correct usage. The vocabulary in the lessons is controlled to allow for each skill to be presented at different reading levels. Each lesson includes an introductory frame followed by a simple example. Difficulty is gradually increased. Record keeping with an optional printout is provided. The capability for teachers to create lessons to fit the needs of students is also provided.

POTENTIAL USES: This package is most appropriately used with individual students for remedial, standard instruction or enrichment purposes.

MAJOR STRENGTHS: The package is very sequential in the development of each skill. The lessons first give an explanation of the skill prior to the questions. The drill questions at first are displayed with cues and then without cues. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy. The record keeping for student is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: The rewards are not particulary exciting, and would seem not to be a motivator in themselves.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	●				Content is accurate.
	●				Content has educational value.
	●				Content is free of stereotypes.
	●				Purpose of package is well defined.
	●				Package achieves defined purpose.
	●				Content presentation is clear and logical.
	●				Difficulty level is appropriate to audience.
				●	Graphics/sound/color are used appropriately.
	●				Use of package is motivational.
	●				Student creativity is effectively stimulated.
	●				Feedback is effectively employed.

SA	A	D	SD	NA	
	●				Learner controls rate and sequence.
	●				Instruction integrates with prior learning.
	●				Learning can be generalized.
	●				User support materials are comprehensive.
	●				User support materials are effective.
	●				Information displays are effective.
	●				Users can operate easily and independently.
	●				Teachers can employ package easily.
	●				Computer capabilities are used appropriately.
	●				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

The evaluators indicate they would highly recommend this package.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Vocabulary Dolch

VERSION: 1981

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January, 1983 at the Clackamas County ESD in Milwaukie, Oregon, and at Northwest Regional Educational Laboratory, Portland, Oregon.

COST: $39.95

ABILITY LEVEL: Pre-school through grade 3
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4" flexible disk, protected
REQUIRED HARDWARE: Apple, 48K, cassette control device, 1 disk drive, monitor, cassette player/recorder, printer (optional)
REQUIRED SOFTWARE: Cassette tapes, Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction
INSTRUCTIONAL TECHNIQUE: Instructional management, authoring, drill and practice

DOCUMENTATION AVAILABLE: In program—student's instructions. In supplementary materials—suggested grade and ability level(s), program operating instrucions, teacher's information.

INSTRUCTIONAL OBJECTIVE: (INFERRED) To provide drill and practice on the Basic Dolch word list.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: All Dolch words from pre-reading through the third grade are included on the computer lessons. The student sees the word and says the word. He/she then hears the word. The student indicates if he/she knew the word. The computer stores the student's responses for future review and planning. The teacher must record the word or words in context on a cassette tape recorder.

POTENTIAL USES: This package is most appropriate for use with individual students.

MAJOR STRENGTHS: The unique use of the Cassette Control Device (CCD) is a positive aspect of some of the authoring programs as it gives students both visual and auditory clues. Record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed. The capability for the teacher to author appropriate materials for students is a real plus! By following directions in the program and reading the documentation carefully, the process is very easy.

MAJOR WEAKNESSES: Many directions for young student, would require aid to help run the program. In most cases the motivational factor in using the material is in using the computer itself. The material is generally an electronic workbook (which is not all bad) and immediate feedback is a positive reason for using the computer in drill and practice. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

OTHER COMMMENTS: CCD is slot #2.

EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
	•	•			Use of package is motivational.
		•		•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•	•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Word Families

VERSION: 1981

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January, 1983 at the Clackamas County ESD in Milwaukie, Oregon.

COST: $29.95

ABILITY LEVEL: Pre-school through grade 2
SUBJECT: Language Arts
TOPIC: Reading
MEDIUM OF TRANSFER: 5-1/4" flexible disk
REQUIRED HARDWARE: Apple II, 48K, 1 disk drive, monitor, printer (optional)
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Remediation, standard instruction, assessment
INSTRUCTIONAL TECHNIQUE: Authoring, drill and practice

DOCUMENTATION AVAILABLE: In supplementary materials—instructional objectives, sample program output, program operating instructions, teacher's information, student's instructions.

INSTRUCTIONAL OBJECTIVE: (STATED) To provide drill and practice for elementary students in grades 1-2 in the areas of beginning consonants, ending consonants and median vowels.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: The student is presented with a TV screen and a word with a letter underlined. There are several other single letters presented. If one of those letters selected by a student makes a new word, it appears on the TV screen. The stimulus remains until all correct choices are made, then goes on to the next word and letters. Student planning/record keeping is included. Teacher can also create their own lessons.

POTENTIAL USES: This package is most appropriate for use with individuals or small groups.

MAJOR STRENGTHS: It is easy to operate once the student knows what to expect. The capability in this program for the teacher to author appropriate material for students is a real plus! By following directions in program and reading documentation carefully, the process is very easy. Record keeping for students is a strong point in that it tells not only how many were missed, but exactly what was missed.

MAJOR WEAKNESSES: Uses the same visual display for all lessons and could be monotonous. Students would have to be told what clues to look for to know it is time to move on. For example, if they have not made all choices possible, the computer will wait--and wait. No directions are given to student on screen. The rewards are not particularly exciting, and would seem not to be a motivator in themselves.

EVALUATION SUMMARY

SA	A	D	SD	NA	
•					Content is accurate.
	•				Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
				•	Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
	•				Information displays are effective.
	•				Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.

Word Search

VERSION: 1981

PRODUCER: Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821

EVALUATION COMPLETED: January, 1983 at the Clackamas County ESD in Milwaukie, Oregon.

COST: $26.95

ABILITY LEVEL: Grades 2-6
SUBJECT: Language Arts
MEDIUM OF TRANSFER: 5-1/4" flexible disk, protected
REQUIRED HARDWARE: Apple, 48K, printer, 1 disk drive, monitor
REQUIRED SOFTWARE: Applesoft, DOS 3.3 or 3.2
INSTRUCTIONAL PURPOSE: Authoring

DOCUMENTATION AVAILABLE: In supplementary materials — program operating instructions, and teacher's information.

INSTRUCTIONAL OBJECTIVE: (INFERRED) To provide a means for teachers to generate their own word searches.

INSTRUCTIONAL PREREQUISITES: None stated.

CONTENT AND STRUCTURE: Program allows teacher to enter a series of words (22 maximum) to create a Wordsearch to the specifications of the user. Words can be hidden by overlapping letters or by spelling forward, backward, and/or diagonally. The words are printed with the search and a solution is printed if requested.

POTENTIAL USES: Word Search produces puzzles either to introduce or reinforce vocabulary in any curricular area.

MAJOR STRENGTHS: The program is well set up for this type of activity and is easy to use.

MAJOR WEAKNESSES: None stated.

EVALUATION SUMMARY

SA	A	D	SD	NA	
				•	Content is accurate.
				•	Content has educational value.
				•	Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
				•	Content presentation is clear and logical.
				•	Difficulty level is appropriate to audience.
				•	Graphics/sound/color are used appropriately.
	•				Use of package is motivational.
	•				Student creativity is effectively stimulated.
				•	Feedback is effectively employed.

SA	A	D	SD	NA	
				•	Learner controls rate and sequence.
				•	Instruction integrates with prior learning.
	•				Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
				•	Information displays are effective.
				•	Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A - Agree D - Disagree SD - Strongly Disagree NA - Not Applicable

Evaluators indicated they would use or recommend use of this package with little or no change.

Northwest Regional Educational Laboratory
300 S.W. Sixth Avenue • Portland, Oregon 97204
(503) 248-6800

This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

Permission to reproduce this document is hereby granted.